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PEACE HAWK: A CASE STUDY OF A FOREIGN MILITARY SALES PROGRAM AND ITS MANAGEMENT

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The purpose of this thesis is to present an FMS case study which provides a comprehensive synthesis of the management structure and functions of Peace Hawk. The effectiveness of Peace Hawk is examined against its objectives of providing F-5 aircraft to Saudi Arabia and enabling the Saudis to achieve maximum self-sufficiency in all facets of F-5 operations, training, and support. To accomplish this purpose, this study begins with a discussion of the Peace Hawk environment and then chronologically develops the six phases of Peace Hawk. Phases I, II, IV, and VI involved the sale of F-5B/E/F aircraft to Saudi Arabia. Phases III and V involved maintenance, training, and construction in support of those F-5 aircraft. Many organizations, including the DOD, HQ USAF, AFSC, AFLC, the United States Military Training Mission in Saudi Arabia, San Antonio Air Logistics Center Detachment 22, the Northrop Corporation, and the Peace Hawk Project Office of the Royal Saudi Air Force have had active roles in Peace Hawk. The functions of these organizations and their impact on Peace Hawk are discussed. Several Peace Hawk problem areas also are listed, and actions taken to correct them are noted.

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PEACE HAWK: A CASE STUDY OF A FOREIGN MILITARY SALES PROGRAM AND ITS MANAGEMENT

A Thesis

Presented to the Faculty of the School of Systems and Logistics

of the Air Force Institute of Technology

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In Partial Fulfillment of the Requirements for the

Degree of Master of Science in Logistics Management

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DATE: 15 June 1977

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INTRODUCTION

Problem Statement

A comprehensive synthesis of Phases I through VI of Peace Hawk, which encompasses the sale of F-5 aircraft and logistics support to Saudi Arabia, does not exist. A previous thesis on Peace Hawk Phases I, II, and III was completed in 1974 (25). Since that time, an extension of Phase III and three additional phases, Peace Hawk IV, V, and VI, have been implemented. Documentation of these additional phases is in the form of letters and directives, program descriptions, executive summaries, and DD Forms 1513, and is maintained by separate offices of primary responsibility within Headquarters Air Force Logistics Command (HQ AFLC), the San Antonio Air Logistics Center (SA-ALC), and the Aeronautical Systems Division (ASD) of Air Force Systems Command (AFSC). Continuity of Peace Hawk management within HQ AFLC has been broken by recent changes in personnel responsible for the program. These changes have made an integrated perspective of Peace Hawk difficult to achieve.

Purpose and Justification

Peace Hawk warrants a comprehensive synthesis by virtue of the Foreign Military Sales (FMS) concept which it represents. This concept entails the sale of extensive logistics support systems, along with the hardware, to expanding "third world" allies and friendly nations whose economic capability of purchasing complex defense systems temporarily exceeds their technological base for supporting them. The management of the logistics support portion of these sales has become a critical factor in securing the sales, follow-on buys, and the resultant defense ties between the seller and buyer (52:325). A comprehensive synthesis of Peace Hawk written from an independent viewpoint is needed, at the expense of summarizing many of its separately documented technical aspects, to provide an integrated case study which will be of value to managers of foreign military sales.

The need for a comprehensive synthesis has been reinforced by the conclusions of a 1974 Security Assistance Impact Study conducted by Major General H. L. Price, former Director of Military Assistance and Sales (LGF) at Headquarters United States Air Force (HQ USAF). The first item listed among the actions recommended to the Air Staff was:

> 1. There is a need for a keen awareness throughout the Air Force of security assistance objectives, responsibilities, and benefits. To achieve this

> awareness repetitive use of internal Air Force information channels, Air University coverage of the subject in professional military education courses and updating of appropriate USAF directives is required [38:5].

Therefore, the purpose of this thesis is to present an FMS case study which, coupled with a previous School of Systems and Logistics thesis, provides a comprehensive synthesis of the management structure and functions of the Peace Hawk program to date. In addition, the study examines the program's effectiveness in the light of the Peace Hawk objectives of enabling the Royal Saudi Air Force (RSAF) to obtain F-5B/E/F aircraft and to achieve the maximum degree of self-sufficiency in all facets of F-5 operations, training, and support.

Objectives

The objectives of this thesis are:

1. To synthesize an FMS case study which presents the management structure and functions of Peace Hawk Phases I through VI.

2. To examine the effectiveness of this management structure and its functions against the Peace Hawk objectives of enabling the RSAF to obtain F-5B/E/F aircraft and to achieve the maximum degree of self-sufficiency in all facets of F-5 operations, training, and support.

3. To highlight the unique features of the Peace Hawk program and its environment.

Research Questions

1. What is the historical background of Peace Hawk?

2. How has the Saudi Arabian environment impacted upon the success of Peace Hawk objectives?

3. What management roles have HQ USAF, AFSC, AFLC, and Northrop Corporation (Northrop) had in Peace Hawk?

4. What have been some of the problems encountered in Peace Hawk, and what lessons have been learned which may be applicable to similar FMS programs in the future?

Definition of Terms

Foreign military sales. The sale of defense articles and services by the Department of Defense (DOD) to foreign governments. This term does not include sales made directly to foreign governments by United States (U.S.) firms, unless such sales involve credit provided or guaranteed by the DOD (28:30).

In-country. One or more of the locations within Saudi Arabia with which Peace Hawk is involved, including Al Khobar (the location of SA-ALC Det 22), Riyadh (HQ RSAF), and Dhahran, Taif, and Khamis Mushayt Air Bases.

Logistics. All services, supplies, and equipment items required to support a given weapons system. This term will be used to include construction, maintenance,

transportation, training, supply, operation of facilities, and any other services required to render a weapons system efficient and effective (63:4).

Military assistance program. The transfer of defense articles and services to friendly foreign countries on a non-reimbursable basis. This term does not include foreign military sales (32:3).

Non-standard support. Equipment, subsystems, support, and training items which are not used by the U.S. military, but are manufactured in the U.S. and sold to friendly foreign nations.

Northrop. The Northrop Corporation or any of its divisions or subsidiaries involved with Peace Hawk, including Northrop Aircraft Division, George A. Fuller Company, Aircraft Services Division, Page Communication Engineers, Inc., and Northrop Worldwide Aircraft Services, Inc.

Peace Hawk. This term designates one or more of a series of separate foreign military sales made by the U.S. Department of Defense to the country of Saudi Arabia. The leading contractor has been Northrop, and the sales have included primarily F-5 aircraft and related support systems ranging from base construction to training programs.

Security assistance. The transfer of defense articles and services to friendly foreign countries under authority of the Foreign Assistance Act of 1961 and the Foreign Military Sales Act of 1968. This term includes annual supply of defense materiel and services furnished on a non-reimbursement basis to eligible foreign countries (Military Assistance Program), sales of defense materials and services to eligible foreign countries on a reimbursement basis (Foreign Military Assistance), and the granting of economic assistance which may be used for budgeting support for defense and security purposes (Security Supporting Assistance) (76:1-2).

Background

The sale of military equipment and services to foreign governments has increased since the early 1970's (21:14). In the period from 1970 to the end of 1975, U.S. foreign military arms sales totaled some 29.5 billion dollars (2:41). This sales figure represented an increase from approximately one billion dollars in 1970 to a high of approximately 11 billion dollars in 1974 (2:41). This increase in foreign military sales has been due largely to the increasing self-sufficiency of countries which originally accepted arms from the U.S. as grant aid (50:40). These countries can now afford to purchase arms, or to buy them with the help of credit funds annually authorized and appropriated by Congress (50:40).

Saudi Arabia has been one of the countries which has purchased military equipment and services from the U.S. in an attempt to update and modernize its military forces (15:137-88). This military modernization by the Saudi Arabians is one of the major objectives in their overall plan to catapult their underdeveloped desert kingdom into the twentieth century (9:39). A preliminary listing by Newsweek magazine of the 20 countries which signed the largest FMS agreements with the U.S. during fiscal year 1976 revealed that Saudi Arabia was the leading purchaser. Slightly over 2.5 billion dollars worth of purchase agreements had been signed by the Saudis in fiscal year 1976 (2:41).

An outgrowth of the military modernization by Saudi Arabia has been Peace Hawk. This program has involved the sale of Northrop F-5B/E/F aircraft and logistics support including maintenance, training, and facility construction to the Saudi Arabian government. The objectives of the program have been to enable the Saudis to acquire the F-5 aircraft and to achieve maximum self-sufficiency in all facets of F-5 operations, training, and support. Initially, the Peace Hawk program concept was to consist of three phases and each phase was to be negotiated separately (64; 65; 66). The program has since been expanded to include three more phases, Peace Hawk IV, V, and VI (see Figure 1). Phases I and II involved the

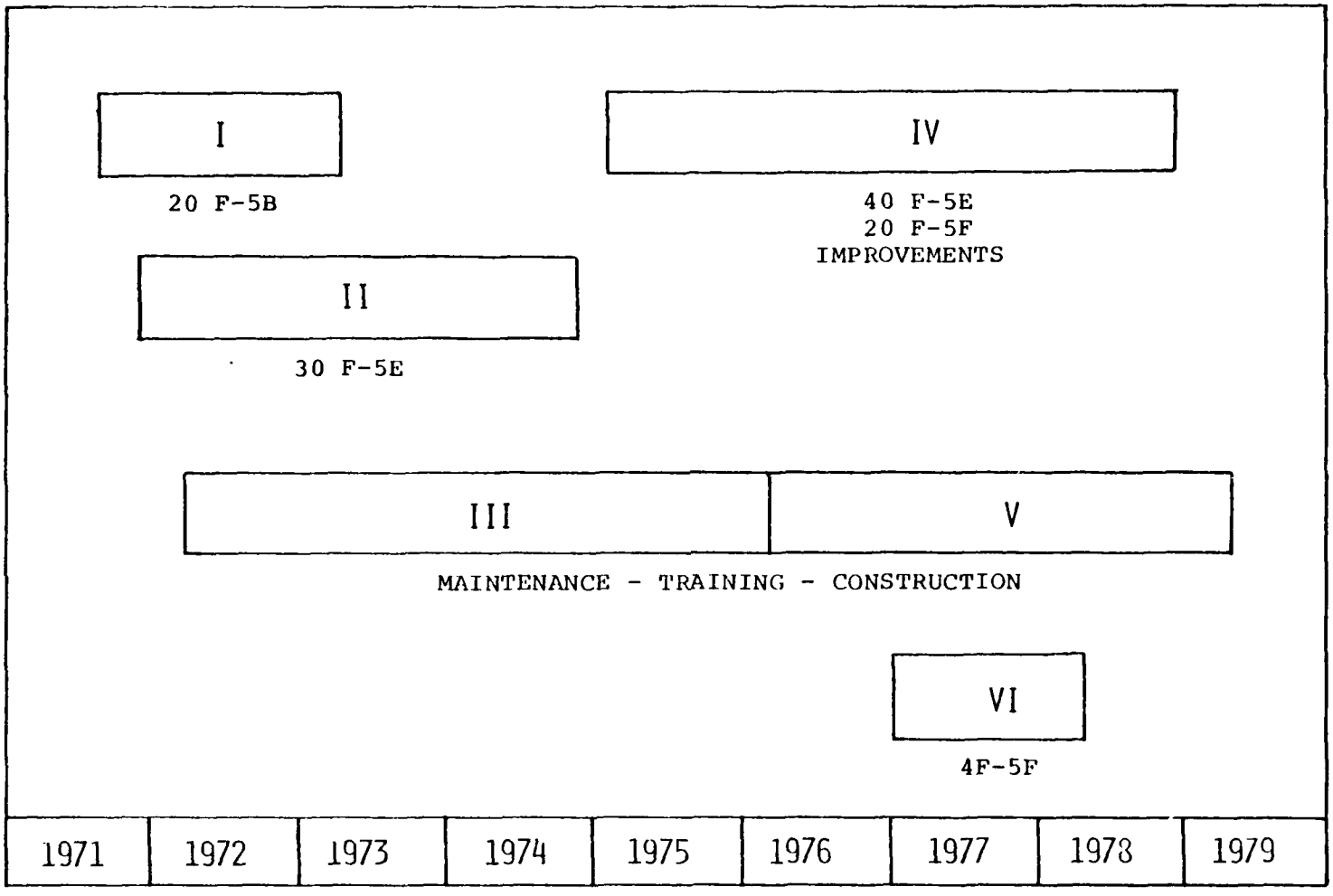

Figure 1

Peace Hawk Program (56:6)

delivery of 20 F-5B and 30 F-5E aircraft, respectively (34:1-1). In addition, both Phase I and Phase II included initial spare parts necessary to support the aircraft for one year (34:1-1). Phase III involved follow-on support for these aircraft and consisted of maintenance, training of maintenance personnel, major construction by the U.S. Army Corps of Engineers, and minor supply activity (34:1-1). Northrop Corporation was designated as the contractor for the in-country support (34:1-1). In August of 1975, Phase III was extended to include support services for additional supply augmentation, long lead time construction, and transition from Phase III to Phase V (34:1-1). Phase IV, currently ongoing, consists of the procurement of 40 F-5E aircraft, 20 F-5Fs, 2 simulators, an extensive aircraft systems improvement program, and support of these acquisitions (34:1-2). Phase V, also currently ongoing, provides for additional support services for the RSAF consisting of in-country English language training, maintenance and technical training, organizational and intermediate maintenance, supply modernization, and other support functions (e.g. operations, bombing ranges, special vehicle maintenance) (34:1-2). A DD Form 1513 (Letter of Offer and Acceptance) for Phase VI, involving procurement and delivery of four additional F-5F aircraft, was signed in January 1977 (70).

Methodology

Data sources. Data for this thesis was derived primarily from written communications and unstructured interviews with individuals knowledgeable in the Peace Hawk program. Written communication sources consisted of inter- and intra-command messages and letters, project contracts, DD Forms 1513, project officers' memoranda, statements of work, AFLC Peace Hawk status briefing materials, minutes of Peace Hawk conferences, and unpublished research papers on Peace Hawk. DOD and USAF publications and studies, such as AFM 400-3, Foreign Military Sales, and Security Assistance Impact Studies also were utilized. Recent news articles from periodicals such as Time, Newsweek, and U.S. News and World Report and from professional journals such as Aviation Week and Space Technology, National Defense, Defense Management Journal, and Commanders Digest also have been used.

Unstructured interviews, both personal and via telephone, were conducted with knowledgeable individuals from AFSC, AFLC, and the Air Force Acquisition Logistics Division (AFALD), who are presently or have been, involved with Peace Hawk. Some of these individuals included Lieutenant Colonel Richard C. Solte and Mr. Charles L. Stockhauser from AFLC; Mr. Orlie Lee from AFALD; Captain John Shedd from AFSC; and Mr. Tom Higginbotham from the Dayton

Support Group of Northrop Worldwide Aircraft Services, Inc. (NWASI). Lieutenant Colonel Solte is Chief of the Peace Hawk Division at the San Antonio Air Logistics Center. Mr. Stockhauser is the Chief of the Directorate of International Logistics/Special Projects at HQ AFLC. Mr. Lee was the Chief of the Saudi Arabian Division (MIMS) of the Directorate of Mid-East Programs (MIM) at HQ AFLC. Both Mr. Stockhauser and Mr. Lee have been involved with Peace Hawk since its beginning. Captain John Shedd has been the AFSC Country Manager for Saudi Arabia since 1973. Mr. Higginbotham is a Senior Logistics Specialist in the Dayton Support Group of NWASI located at HQ AFLC. This group is responsible for monitoring research, development, acquisition, and other identifiable activities relating to Peace Hawk. It is also responsible for tracking the status of requisitioned supply items for Peace Hawk (17). Prior to this job, Mr. Higginbotham was in the USAF and worked on Peace Hawk while serving as Chief, International Logistics/ Weapons Systems Activation Division at HQ AFLC. All of these individuals have made numerous trips to Saudi Arabia in support of Peace Hawk.

Procedures. Information was selected from the data outlined according to the following two criteria:

1. Relevance to the research problem, the research questions, and the objectives stated. This "relevance"

was determined by the best judgment of the researchers as heavily influenced by the views of the experts cited. Data of possible importance obtained from written sources was discussed at length with these knowledgeable individuals.

2. Reliability, considering the source. Reliability of information was determined by the best judgment of the researchers. This determination was based on the comparison of multiple sources for consistency and the careful examination of all sources for currency. Information obtained from interviews with knowledgeable individuals was assessed for reliability according to the individual's depth of experience with the Peace Hawk program and comparison with program documentation.

Plan of Presentation for the Thesis

Chapter I: Introduction. This chapter states the problem, the purpose and justification of the thesis, defines terms, outlines objectives, and sets forth research questions to be answered by the thesis. It contains a brief introductory overview of Peace Hawk and the significance of the program.

Chapter II: Saudi Arabia: The Peace Hawk Environment. This chapter addresses the Saudi Arabian environment, the country and its culture, education, government, and economic and social conditions. It contains a brief

summary of Saudi Arabia's defense status and its strategic situation. Primary sources were unpublished Air War College and Air Command and Staff College research papers, the Area Handbook for Saudi Arabia, articles from various news magazines, and interviews with DOD personnel who have visited Saudi Arabia or have been stationed there.

Chapter III: Evolution of Peace Hawk: Phases I, II, and III. This chapter chronologically traces the development of Saudi Arabia's military connections with the U.S. from the origin of Peace Hawk through the actual sale of F-5 aircraft and logistics support. Because Peace Hawk Phases I, II, and III were treated extensively in a earlier thesis effort (25), these phases are summarized. Events associated with the completion of those phases which occurred after the termination of the previous thesis effort are noted.

Chapter IV: Peace Hawk Management Structure. This chapter discusses the Peace Hawk management structure and organization. Many organizations have had active roles in Peace Hawk, including the Department of Defense (DOD), HQ USAF, AFSC, AFLC, the United States Military Training Mission (USMTM) in Saudi Arabia, SA-ALC, SA-ALC Detachment 22, the Northrop Corporation, and the Peace Hawk Project Office of the Royal Saudi Air Force. The functions of each organization and how they have impacted Peace Hawk are addressed.

Chapter V: Peace Hawk: Phase III Extension and Phases IV, V, and VI. This chapter chronologically relates the evolution and major events of Peace Hawk Phase III extension and Phases IV, V, and VI. Primary emphasis throughout these phases is placed on logistics management and the interrelationships necessary to assure continued successful achievement of RSAF objectives under the Peace Hawk program.

Chapter VI: Peace Hawk Problem Areas. This chapter discusses some of the problems encountered during the implementation of Peace Hawk and notes changes which were implemented in response to some of these problems.

Chapter VII: Conclusions and Recommendations. This chapter summarizes the major findings of the research effort, addresses their significance, states resulting conclusions, and makes recommendations for future thesis effort on Peace Hawk and related areas. The research questions initially set forth are answered in this chapter.

CHAPTER II

SAUDI ARABIA: THE PEACE HAWK ENVIRONMENT

The purpose of this chapter is to provide the reader with an insight into the operating environment of Peace Hawk. To understand Saudi Arabia today, and consequently the adaptive structure of Peace Hawk, it is first necessary to understand the country in terms of its culture. This culture is deeply rooted in history, religion, and geography, without some knowledge of which one cannot have an appreciation for the struggles, problems, or progress of present day Saudi Arabia, or of Peace Hawk.

Country

Saudi Arabia is more than three times the size of Texas (46:72) and occupies an area covering four-fifths of the Arabian Peninsula (11:1-1). This desert kingdom (see Figure 2) is bounded on the north by Jordan, Iraq, and Kuwait; on the east by the Persian Gulf; on the south by Yemen; and on the west by the Red Sea (47:316). The physical environment of Saudi Arabia can be characterized as being very rough and inhospitable for human habitation. There are rugged mountains in the extreme western part of the country, lava formations in parts of the west-central portion, and most of the remaining land is

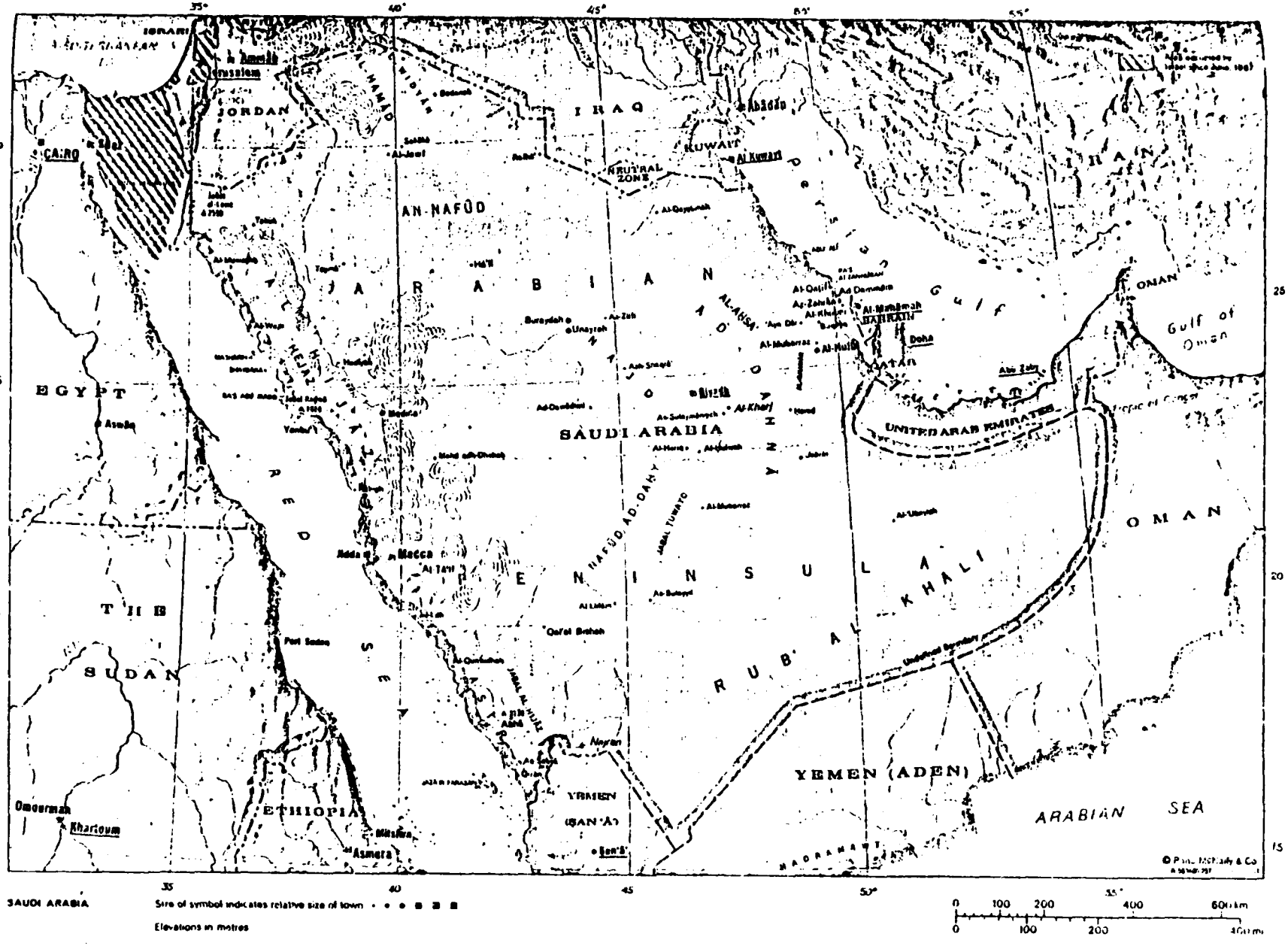

Figure 2
Map of Saudi Arabia (48:279)

sand-covered and consists of the great deserts of the Rub al Kahli (Empty Quarter), the Nafud, and the Dahna (79:9).

The climate of Saudi Arabia can be compared to that of the American Southwest with summer temperatures sometimes exceeding 120 degrees over much of the country (42:1-2). Temperatures decrease rapidly at night and occasionally drop below freezing in midwinter along the northern frontier and in the mountains along the western coast. These temperature extremes coupled with excessively high humidity (often 100 percent for extended periods) along both the Persian Gulf and Red Sea coasts add to the discomfort of the inhabitants of Saudi Arabia (11:1-2). Saudi Arabia has no permanent rivers or bodies of water (79:17), and rainfall is scarce, averaging four inches or less over most of the country (79:16). The harshness of terrain, extremes of climate, and the scarcity of water have resulted in less than one percent of the country being suitable for agriculture (79:9). These factors have resulted in a population distribution which varies from almost none in the desert areas to very high densities located in towns along the eastern and western coasts and oases in the interior (79:9).

Early History and Religious Base

For at least 3,000 years Arabia has been sparsely peopled by Semitic Arabs, nomadic Bedouin camel herders,

and seminomadic sheepherders and goatherders (79:1,25). According to ancient traditions (79:48), the Arabs originally were descended from a northern stock and a southern stock. The southerners supposedly descended from Himyar, son of Qahtan, and are generally agreed to be the true Arabs. The northerners, supposedly descended from Abraham, through his son Ishmael and his descendant Adnan, are called the assimilated Arabs. Though rivalry between members of the two groups was significant in early Islamic times, it is of little consequence today except on the southern fringes of the country.

The Prophet Mohammed was born into a tribe of the northerners in Mecca in AD 570. Troubled by social inequities and heterodox religious practices of his fellow Meccans, he retired from managing caravans to religious study, and began preaching a stern monotheistic and egalitarian religion based in part on the teachings of Judaism and Christianity. In 622, Mohammed and his small band were forced by persecution to flee from Mecca to Medina. After eight years of conflict, however, the Meccans accepted Islam, Mohammed returned to Mecca, and the Kaaba (House of God) of Mecca (to which Arabs had pilgrimmaged for worship since the time of Abraham and Ishmael) became the religious center of Islam. The Kaaba, today, is the holiest place in the world to some 465 million Arabs throughout the world, one million of whom travel there

annually to pay homage (31:753). By the time of Mohammed's death in AD 632, most of the peninsula had been won to Islam through diplomacy or military conquest. Within 20 years of Mohammed's death, the Islamic armies had decisively defeated the Byzantine and Persian armies and had gained control over a vast territory from Tripoli in North Africa to the eastern limits of Persia (79:27).

The effect of Mohammed and Islam on Saudi Arabia, the cradle and center of Islam, is profound. Five times a day the entire population with few exceptions bows on the ground facing Mecca and prays to God. Public law in Saudi Arabia is the religious law or "Sharia," which was derived from the Koran, the teachings of Mohammed. (The "Sharia" has been supplemented somewhat in recent years by royal decrees in order to meet new situations, such as industrial accidents [4:18].) It is rare that conversing Saudis will utter more than a sentence or two without some reference to God. The words, "There is no God but God" and "Mohammed is the messenger of God" are inscribed on Saudi Arabia's national flag. An extremely orthodox sect of Moslems, the Wahabis, who have considerable influence with the government, are responsible for insuring that the tenets and practices of Islam are strictly observed. Religious policemen, the Mutaween, normally render public on-the-spot beatings to enforce these practices upon such offenders as men with long hair and women with exposed

legs. In the face of rapid modernization of his country, however, the late King Faisal was able to make many balancing adjustments. He terminated government subsidation of the Mutaween, though he allowed them to continue to enforce religious laws on a voluntary basis. The King has been able to make such adjustments because, besides being the central figure in the Saudi Arabian government, the head of state, and the commander-in-chief of the armed forces and police, he is also the religious leader (79:viii). His power receives much of its strength and solidarity from his operating according to ". . . principles deeply imbedded in the consciousness and understanding of the people [4:17]"; however, it is limited by restrictions of custom and law.

The main theme of the Islamic religion is submission to the will of God. Though Moslems worship exactly the same God that Jews and Christians do, and though their religion was revealed through the same line of prophets, including Abraham, Moses, and Jesus, they believe the full and final revelation of God to man was given to Mohammed and later embodied in the Koran (4:12). The potent effect of the Islamic religion on Saudi Arabia can be summarized by the following quotation:

> Devout Moslems hold that religion, law, commerce, and social policies are inseparable. Islamic law embraces the whole range of personal and social life. It tells the believer how to live righteously and the community at large how to conduct its affairs, spiritual and temporal. Saudi Arabia is still officially

governed according to the Koran and Sharia law. The King is theoretically bound to rule in accord with Koran and tradition [4:13].

History of Saudi Arabian Government

The unity Arabia had experienced under Mohammed deteriorated into warring tribes and independent towns. As a result of Arabia's subjection after 1517 to the Ottoman Empire, only Mecca (as a result of Moslem pilgrimages) and the Red Sea coastal area had any contact with the outside world for three centuries. While the Ottomans were engaged in wars with Austria, Russia, and Persia, however, their power to patrol the Red Sea area was considerably weakened. An internal consolidation of power was promoted by a religious movement led by Mohammed Ibn Abd al-Wahhab in the eighteenth century. Wahhab, shocked by the deviations from Koranic teachings of Mohammed, started preaching a puritanical form of Islam aimed at returning to the strict teachings of the Koran. In accordance with these same teachings, major crimes are punished today by beheading, alcohol is forbidden, women are veiled in public, there are few movie theaters, the law requires that adulteresses be stoned to death, and a hand is cut off after the third conviction for theft (44:30). Emir Mohammed Ibn Saud, the founder of the present ruling dynasty (and a son-in-law of Wahhab) embraced Wahhab's doctrines and attracted a large Bedouin following which was fanatic in support of

the Wahhabi religious movement. Saud captured Riyadh in 1764 and established his supremacy throughout central Arabia by a web of conquests, marriages, and alliances. After his death his son, Abd al-Aziz, extended Saud's conquests toward the peripheries of the peninsula, built fortified garrisons outside the towns he captured, appointed district governors to collect taxes and recruit soldiers, and centralized important decision making. Abd al-Aziz's son, Saud, who succeeded him in 1803, captured important cities on the Red Sea coast including Mecca and Medina, occupied most of the peninsula and parts of Iraq, and invaded Syria. The Ottomans, aware that their empire was threatened by Saudi expansion, called upon the Ottoman Viceroy of Egypt to crush the Saudi-Wahhabi Empire. After the death of Saud and the succession of his son Abdullah, Egyptian armies recaptured the Red Sea coastal area, razed the Saudi capital, and beheaded Abdullah (79:31).

Ottoman control over central and western Arabia continued through the end of the nineteenth century, and British influence increased along the southern and eastern coasts. During this century, Central Arabia was an arena for violent personal rivalries among powerful tribal families. These rivalries were fostered by the Turks as a means of consolidating their power. By the late 1880's, however, the Saud and Rashid families emerged as the most

powerful contenders. In 1902, under the leadership of 22 year old Ibn Saud, the Sauds overpowered a much larger Rashidi force to capture Riyadh. Gaining the support of neighboring Bedouin tribes, Ibn Saud had expanded his rule throughout Central Arabia (the Nejd) by 1904. Shortly afterwards, eight Ottoman battalions, supported by artillery, joined the Rashidi forces but were routed by Ibn Saud's mobile desert fighters. As a result of this Saudi victory, many sheiks who were formerly neutral gave their loyalty to Saud. By 1906 the remaining Ottoman troops had been withdrawn from Central Arabia, and the Rashidi forces had been overwhelmingly defeated. By 1913, Ibn Saud had driven the Ottoman Turks from the cities of the oil rich eastern Persian Gulf area (Al-Hasa) of Saudi Arabia. These victories left the Ottoman Empire in control of the Hejaz and Asir, and the western Arabian cities of Mecca, Medina, Taif, and Jidda. The British Empire exerted control of most of the southern and Persian Gulf coasts (79:32-35).

Unification of Saudi Arabia

To gain loyalty between local tribes and villages which had long been at war with each other, Ibn Saud found a unifying force in religion. He sent Wahhabi missionaries to the various tribes and encouraged the Bedouins to settle in agricultural communities founded on and

governed by Wahhabi religious precepts. Then he recruited armed forces from among these communities, which became known as Ikhwan (brethren). Within a few years such settlements numbered 60 and sheltered some 40,000 nomads. In 1916, Ibn Saud ordered all Bedouin tribes to join the Ikhwan and pay tax to him. He required the tribal sheikhs to attend a school of Islamic law and religion at the Riyadh Mosque. When the sheikh of an Ikhwan tribe completed his religious instruction, he was often given a house in Riyadh, and was thus kept under close supervision to ensure his allegiance. It was said that the Ikhwan could be completely mobilized within four days with 25,000 men under arms (79:35).

In the early months of World War I, the British sought the support of the Saudi forces against the Ottomans and their Rashidi allies. The British recognized Ibn Saud's rule and granted him a monthly subsidy of 5,000 pounds, in return for an understanding that he would renew the war with the Rashidi. [It is interesting to note that it was at this time that Colonel T. E. Lawrence (Lawrence of Arabia) achieved renown through the Ottoman defeat at Aqaba.] In decisive battles in 1919, 1920, 1921, and 1925, Ibn Saud and his son, Faisal (the late King of Arabia), defeated the Ottoman forces under Hussein, thus accomplishing complete Saudi rule over the remainder of previously Ottoman-controlled lands. Subsequent Ikhwan raiding

parties defeated the remaining Rashidi forces. Ibn Saud then married the widow of the defeated Rashidi leader, adopted his children, and brought the surviving male members of the Rashid family to his capital, Riyadh, as honored guests. His son, Faisal, was left to act as Viceroy of the Hejaz. Though Ibn Saud had abolished tribal raiding in order to promote unity among the tribes, during the late 1920's he was forced to almost completely decimate his Ikhwan forces in order to reestablish control over their raiding excesses (79:36-40). In September of 1932, Ibn Saud proclaimed his country to be called the Kingdom of Saudi Arabia.

The Discovery of Oil

The most far-reaching event in the modern history of Saudi Arabia was the discovery of oil in the 1930's. In 1933, King Ibn Saud granted wide-ranging concessions to Standard Oil of California, renamed the Arabian American Oil Company (Aramco) in 1944. (Aramco is now jointly owned by Saudi Arabia, Texaco, Exxon, Mobil, and Standard Oil of California [46:72].) The first oil well began producing in 1938; however, oil production was suspended during World War II. This suspension and a concurrent stoppage of pilgrimage traffic caused economic hardship in the country. The United States provided stopgap economic aid by including Saudi Arabia in the Lend-Lease Program and by allocating to

the Saudis a portion of United States wartime loans to Great Britain. In return for U.S. military equipment and advisers, King Ibn Saud allowed the United States to build and lease an airfield at Dhahran. In March 1945, following February discussions with President Roosevelt aboard a ship in the Red Sea, King Ibn Saud also declared war on Germany. (The discussions between the two leaders had centered around the United Nations, oil developments, and the Palestinian question, on which Roosevelt promised to take no stand without first consulting with the Arab states.) Though Saudi Arabia later opposed the creation of a Jewish state in the Middle East, its military participation in the 1946-48 Palestine War was minimal (79:41).

Saudi Arabia Under Saud and Faisal

The expansion of oil production and oil technology after the war fostered Arabian economic and social development, as well as a continued strengthening of relations with the United States. Aramco was highly responsible for these strengthened relations.

Political and economic change. Recognizing the need for more fully developed governmental administration, Ibn Saud established a Council of Ministers in October 1953. He further divided the power he had held as King by naming his eldest son, Saud Ibn Abd al-Aziz, heir to the throne and commander-in-chief of the armed forces. Ibn Saud

named his second son, Faisal, foreign minister and governor of Hejaz. The following month Ibn Saud died. After King Saud ascended to the throne, he appointed Faisal prime minister as well as foreign minister, and created new ministries of commerce, education, information, and agriculture. He increased expenditures for schools, roads, communications, urban development, and facilities for the holy pilgrimages. With ultimate control of the nation's wealth belonging to the King and the royal family (44:35), King Saud exhibited almost boundless generosity, using the rapidly increasing oil revenues for both official obligations and unofficial gifts. In 1956, King Saud postponed renewing the U.S. lease to Dhahran Air Base. (This lease was finally renewed in 1957; however, the Saudi government refused to extend the lease upon its termination in 1962.) He broke diplomatic relations with Great Britain and France, banned oil shipments to the two countries, and granted $10 million to Egypt when Great Britain, France, and Israel invaded Egypt. Oil shipments and diplomatic relations were later restored, but relations with Egypt steadily worsened. By 1958, expenditures exceeded receipts and Saudi Arabia's financial position had become precarious. In March 1958, the princes of the Saud family forced King Saud to relinquish full power over the country's domestic and foreign policies to Crown Prince Faisal, who immediately subjected government finances to strict

accountability, restored the country to financial health, and increased the executive powers of the Council of Ministers. Though differences over policy matters between King Saud and Crown Prince Faisal resulted in Faisal's resignation in 1960, Faisal was reinstated in 1962 and also assumed the position of commander-in-chief of the army. He abolished slavery, reorganized local government and justice, and proposed new legislation regarding education, social security, and labor. In March 1964, Faisal had King Saud accept a decision by the royal family and the Ulema (body of Islamic religious leaders) which removed the Royal Guard from Saud's personal command and placed it under the Minister of Defense and Aviation (MODA); he abolished the royal court, and cut the King's income in half (79:42-46).

After March 1964, Faisal was in control of the government. He continued to press his modernization program, improving education, developing communication facilities, introducing television, broadening industrialization, and planning dramatic improvements in agriculture. The Ulema issued a legal decision in November 1964 deposing Saud and pledging allegiance to Faisal as King. The Council of Ministers confirmed the deposition and the army, several provincial governments, and tribal sheikhs followed suit in pledging allegiance to King Faisal. King Faisal then

officially recombined the positions of king and prime minister and retained both (79:42-46).

Social structure. The deposition of King Saud illustrated the importance to the King of maintaining a consensus among the royal family, (which is approximately 5,000 members strong), the Ulema, and the important tribal sheikhs. Traditional tribal leadership in Saudi Arabia is vested in a sheikh who usually has been the headman of the leading lineage of the tribe. His possession of authority implies good heredity and respected personal qualities more than personal power or superiority. He regulates disputes within the tribe, makes decisions on affairs of mutual interest to its members, and represents the tribe in its relations with the government and outsiders. But, he retains his position by holding regular open councils for the conduct of tribal business and maintaining an informal consensus of the sheikhs of lineages within his tribe (79:62). Much of the uniting influence that Ibn Saud was able to exert over the divided tribes of Arabia was attributable to his policy of patronizing these sheikhs. In exchange for their loyalty to him, Ibn Saud recognized their positions of leadership and enhanced their status by granting them government subsidies.

Labor force. Though Ibn Saud began an effort which was continued by King Faisal to settle the Bedouin tribes in

permanent communities, it was estimated as late as 1965 that 50 percent of the country's population was still nomadic. Another 25 percent of the population was occupied in sedentary farming on one percent of the country's total land area (79:203). In 1965, the total Saudi Arabian work force was estimated to be a little over one million persons. This figure included all males over nine years of age. An estimated 75 percent of this work force was considered self-employed, either in agriculture or as shop keepers or artisans. The overwhelming majority was engaged in agriculture as herders or cultivators with the remaining 25 percent of the work force engaged in wage-earning occupations. This segment of the work force engaged in wage-earning occupations, about 250,000 persons, included about 150,000 government employees. The remaining 100,000 persons were employed in small craft, trade and service establishments, and in the modern industrial and trade sector. Aramco was the leading industrial employer, employing over 10,000 Saudis (79:258). By 1973, an average Saudi family of four received about $1,500 to $2,000 a year, which was barely enough to live on in Saudi Arabia. Only a handful of educated Saudis, mostly Aramco and government employees, earn over $5,000 (44:35). Between the wage earners and the royal family, there is virtually no "middle class" in Saudi Arabia (46:73).

Oil and the Economy

Saudi Arabia's oil reserves are immense, with proven reserves of approximately 133 billion barrels. These reserves are about twice those of any other country, and oil experts believe that the actual reserves might be as much as five times higher (44:23). Scarcity of oil in other parts of the world has caused other countries to begin to search for alternate energy sources. The Saudis are aware of this and are determined to use their oil reserves for maximum benefit while world dependence upon their oil remains. Instead of cutting back on oil production in order to make their oil reserves last longer, they have embarked on a forced-draft expansion to quadruple their production to 20 million barrels a day by 1980 (44:28). When they reach this goal, the Saudis will have passed the United States as the leading world oil producer and will be supplying approximately 25 percent of worldwide demand (44:28).

Saudi officials realize that their oil reserves will not last forever, and are aware of the future possibility of decreased world dependence on oil. To counter this possibility, they have given high priority to the industrialization and modernization of their country to help assure future sources of income. Planning Minister Isham Nazer made the following statement:

> We have five to eight years to lessen our dependence on oil and diversify our economy before the world lessens its dependence on us. There isn't a moment to be lost [9:39].

Despite the huge modernization and industrialization programs, the Saudi government is preoccupied with what to do with the increasing oil profits. They literally have more money than they know what to do with (44:28).

Modernization. Aramco has played a vital role both in the economic development of Saudi Arabia and the strengthening of relations between that country and the United States. The expansion of the oil industry in general (which provided 85 percent of the Saudi government income in 1970) and Aramco in particular have been responsible for creating the industrial labor force in Saudi Arabia. Between 1953 and 1965, Aramco built a deepwater port at Damman, a 360-mile railroad connecting Damman with Riyadh, hospitals and schools, sanitation and security facilities for the holy city of Mecca, and modern buildings, roads, and lighting in Jidda, Mecca, Riyadh, Dhahran, and other urban centers. By the mid-1960's, Aramco, on request from the Saudi government, was increasingly assisting in projects totally unrelated to oil activities. It was conducting feasibility studies on a number of possible industries, providing advice to Petromin (a government agency created in 1962 to oversee petroleum and mineral research, production, and marketing), making loans to other industries,

aiding in the development of electric power companies, and handling a land reclamation project (79:41).

As a result of increasing oil revenue and the government's push toward production diversification, reduction of dependence on oil, higher Saudi employment, and a more equal distribution of wealth (40:43), by the mid-1960's western countries and companies other than the U.S. and Aramco were becoming significantly involved in the Saudi government's economic diversification and modernization program. Several German and Italian firms were assisting in the construction of modern roads; a Swedish company was under contract to install a modern automatic telephone system; French companies were constructing a broadcasting station in Riyadh; and British companies were overseeing the construction of a steel rolling mill in Jidda. American companies other than Aramco had also become involved in Saudi modernization projects, including the establishment of an oil refinery in Jidda, an ammonia plant in Damman, and various water development projects. Other projects designed to diversify the economy which were begun by the Faisal government between 1965 and 1970 include a match factory in Riyadh, a Tide soap factory in Jidda, a paint factory in Damman, a glass factory, grain and milling facilities, refrigerator assembly plants, a water desalination plant in Jidda, an ammonia and sulphur plant, and a polyvinyl chloride plant (79:255). Though construction

materials to build these facilities had to be imported initially, local enterprises have emerged over the last two decades to provide cement, cement pipe, cement blocks, gypsum wall panels, earth bricks, and cut marble. Factories producing consumer goods such as mattresses, furniture, shoes, clothing, soft drinks, and salt have also emerged (79:253). Saudi planners recognize the only way they will be able to carry out their overnight industrialization is by opening their doors to Western businessmen. But, they are determined to let foreign companies in only as partners with Saudis in joint ventures (9:40), and they insist that any country seeking a contract in Saudi Arabia must provide a training program for Saudis (40:54).

Expanding labor requirements. The rapid expansion of Saudi Arabia's industrial sector has created a serious shortage of trained supervisors, workers skilled in new technologies, and educated government workers. Few Saudi industrial workers have had more than a minimum amount of training and experience. The rural Arab finds it difficult to adjust to the pattern of industrial employment with its fixed hours of work; its demand for steady, repetitive activity; and its requirement for relatively long-term commitment to the same job. As a result, few Saudi workers have achieved industrial skills, and most skilled workers,

technicians, and managerial personnel have been brought in from abroad (79:259). It has been Saudi government policy to restrict the number of work permits issued to non-Saudis to skills not possessed by the Saudi labor force. (Three thousand Saudi Army officers currently studying at American military schools are expected to begin providing the country with more qualified technicians soon [9:40].) Even so, in 1965, it was estimated that over 30,000 non-Saudi workers (skilled workers, technicians, and professionals) were required to supplement the Saudi labor force. By 1970, this number of non-Saudi workers had grown to 300,000, and it is estimated that this number will reach 500,000 by 1980 (14:51). Aramco had led the way in providing an extensive program of both vocational schooling and on-the-job training which had permitted it to increase the percentage of Saudi employees on its work force from approximately 30 percent to 80 percent over a 12-year period. Though a high rate of labor turnover had previously hindered Aramco's industrial growth and the development of a skilled labor force, by 1965 the average length of service of Aramco's Saudi employees was 14 years (79:260). Even so, by 1975 Saudi Arabia's technical elite consisted of only 2,500 men who had studied at universities abroad (9:40).

Education and training. In order to better prepare the Saudi population for expanding modernization, and to provide a native labor force to support the modernization and economic diversification efforts, the Saudi government has placed considerable emphasis on education. In the five year period prior to 1970 the education budget increased by 47 percent, the number of new schools increased by 46 percent, and the student population in primary, secondary, and higher education rose by 85 percent, 148 percent, and 124 percent respectively (79:xi). At that same time over 35,000 adults were participating in a government literacy program which has since been expanded by way of television. Higher education is easily available, and most of the expenses are paid by the government. The number of vocational schools and schools for girls has rapidly increased. However, as has been indicated by the increased number of non-Saudi workers, these education efforts have not been able to supply qualified Saudi workers rapidly enough to meet increasing labor demands.

At present, Saudis are readily welcomed into waiting government jobs after completing only a primary school education (40:22), which a 1966 study found to be 36 percent devoted to religious education (80:17). Though significant strides have been made, the Saudis have begun their modernization efforts a great distance behind other nations. In 1965, the literacy rate of the country was

estimated to be five percent (79:102). By 1970, ten percent of the working population had a primary school education (80:3) and Saudi Arabia had the lowest proportion of trained people among all countries in the Middle East (80:16). Traditionally, women have remained in the home or have shrouded themselves in black from head to toe before appearing in public; only a small percentage of this potential labor force is being utilized today. Saudi men, for cultural reasons, are opposed to manual labor (though they will work as drivers and heavy machine operators) (4:27). Traditions have hampered modernization, as evidenced by the public resistance to television because of the Islamic idea that it is immoral to produce an image of the human body or as evidenced by public resistance to the education of women (40:48).

Westernization has occurred, however. A few women now cover only the upper half of their bodies in public and display fashionable clothing from the waist down. Some women have taken office jobs, and work with their faces unveiled. The number of Saudi men doing manual labor is increasing, and more than 12,000 television sets were in use by 1970 (46:73; 79:x). King Faisal's ability to strike a balance between tradition and modernization will be sorely missed.

Saudi Arabia Under Khalid

On 25 March 1975, King Faisal was shot to death by one of his nephews. In the process of quelling a riot over the introduction of television into Saudi Arabia several years ago, a brother of King Faisal's assassin was killed. Since King Faisal had ordered the riots quelled, his nephew held him personally responsible for the death of his brother. By Arab tradition, he had vowed to revenge his dead brother by killing Faisal. The assassin, Prince Faisal bin Musaed bin Abelaziz, was convicted by a Sharia court and publicly beheaded in the main square of Riyadh. Before the death of Faisal was ever announced, the senior members of the five main clans of the royal family swiftly conferred the crown on Faisal's half brother, Khalid, who had served as deputy prime minister under King Faisal since 1962. Khalid had been selected by the royal family in 1965 to be Faisal's successor (40:16). Another half brother, Fahd, was designated Crown Prince. Initial diplomatic and press reaction was that Khalid would be a figurehead for the more experienced and dynamic Fahd. Khalid was considered in poor health (he had open heart surgery in 1972) and was considered to have a lack of interest in government. However, two years have elapsed and Khalid still rules (4:25).

King Khalid and Prince Fahd showed that they intend to continue the modernization of Saudi Arabia started by

Faisal. In July 1975, they began an ambitious five year 150 billion dollar program for the development of their country's infrastructure which included 530 new schools, 103 new hospitals, 4,855 kilometers of new roads, and two new universities (4:47). A modern $500 million international airport for Jidda is one of thirteen new airports planned. Irrigation projects, harbors, desalination plants, and an artificial oasis also are included in the programmed improvements (9:39).

Among planned industrial improvements are five new oil refineries which are designed to give Saudi Arabia the capacity to refine more than half of its petroleum production. The government hopes to develop a new steel industry by 1979 and a new petrochemical industry by 1980. Studies also are being conducted on the feasibility of exploiting Saudi mineral deposits of iron and gold (9:39-40). So far, the five-year plan is running behind schedule (14:51) due to an extreme shortage of trained manpower and the cumbersomeness of the growing Saudi bureaucracy (14:51; 44:37).

Current Government Structure

The government of Saudi Arabia today is a monarchy whose constitution is based on the law of Islam, or the "Sharia." The "Sharia" prescribes civil as well as religious rights, duties, obligations, and responsibilities

which apply to both the King and his followers. Law is revealed and not created, and is interpreted by the Ulema (46:230).

All power rests ultimately with the King, who is chosen from among the members of the royal family by consensus of the royal family and with the sanction of the Ulema. The King has a Royal Cabinet which functions much like a modern executive staff in providing advice on economic, political, and social problems. In addition, a 24-member consultative or advisory council is chosen by the King from among prominent citizens, businessmen, and professionals. Its purpose is to assist, in an advisory fashion, the work of the Council of Ministers (79:139).

The Council of Ministers is a legislative body whose members are appointed by the King, and who must swear allegiance to the King prior to appointment (79:140). The Council has considerable authority for the supervision of regional and local government. However, Council decisions are subject to veto by the King unless he fails to act within 30 days (48:280). The five most critical ministerial posts--Interior, Defense, National Guard, Finance, and Foreign Affairs--are currently held by members of the royal family (40:13-15).

The current government of Saudi Arabia has a civil service structure. All business connected with government employees is handled through the General Personnel Bureau.

This civil service structure is now undergoing extensive revision, but when designed in the late 1950's it consisted of nine civil service grades below the ministerial level. Grades one through three are political appointments based on recommendations from the Ministers. Jobs in other grades may be obtained based on qualifying examinations. In situations where there are more jobs than there are applicants, those with school certificates may waive examination (79:143).

Despite the large government structure, a big obstacle to industrialization is inefficiency of Saudi officials. Decision-making is a tortuous process, by Western standards, and even small problems are likely to be taken to an already overburdened King (46:74).

Foreign Policy

The Saudi government's utilization of its armed forces has been minimal but not absent in recent years; its foreign policy has been heavily oriented toward other Arab states and the defense of Arab interests. Relations with Great Britain were broken between November 1956 and January 1963 because of the Suez crisis. The September 1962 coup d'eat in Yemen and the establishment of a Yemeni republican government supported by the United Arab Republic (UAR) created a crisis in Saudi Arabia, which supported the overthrown royalist government. In November 1962, this

crisis threatened to break into a full-scale war between Saudi Arabia and the UAR. Egyptian planes bombed Saudi villages on the Yemen border, and the Saudi government gave military assistance to the Yemeni royalists. The United States helped prevent escalation of this conflict by indicating that it would support Saudi Arabia against possible interference in its internal affairs by the UAR, even though it gave recognition to the new Yemeni government. The Yemeni Civil War ended in 1963, but Saudi assistance to royalist forces was reportedly resumed in 1969 when more conflict between royalist and republican forces broke out. The conflict ended in 1970, at which time Saudi Arabia recognized the Republic of Yemen (79:xvii-xviii).

Saudi Arabia has remained vehemently anti-communist; the Communist Party is outlawed, and citizens from communist countries are not allowed into the kingdom. In an article in Newsweek magazine, a Western diplomat commented on Saudi feelings toward communism:

> The rise of the Communist Party in Italy scared the hell out of the Saudis . . . . You may think it strange to hear all the cold-war talk about holding the line against godless Communism, but the Saudis really believe it [14:53].

The Saudis regard communism as pure evil and realize that Islam and communism have nothing in common. Islam is a deeply religious faith, while communism is a Godless philosophy (4:20).

However, communist influence in the area has increased since the late 1960's. Radical socialist movements in the area of the Persian Gulf sheikhdoms (on Saudi Arabia's eastern border); a guerrilla war in the Dhofar Province of western Oman along Saudi Arabia's southern border, fueled by the Red Chinese-influenced government in the People's Democratic Republic of Yemen; the closer developing ties between Russia and Saudi Arabia's big northern neighbor, Iraq; and Russia's naval dominance of the Persian Gulf since the British fleet withdrawal in 1968 have caused increased external security precautions by Saudi Arabia (44:37).

During the Six-Day War of June 1967, when the Arab states broke diplomatic relations with the United States and Great Britain on the conviction that these Western powers were actively backing the state of Israel, Saudi Arabia maintained diplomatic relations with both countries. On the same day that Egypt closed the Suez Canal, Saudi Arabia did, however, suspend oil shipments to both countries. These shipments were resumed the following month after an official government broadcast from Radio Mecca stated that there was no factual evidence that military aircraft of the United States or Great Britain had assisted Israel (79:xxi). Saudi Arabian activity in this was mainly limited to military support extended to Jordan (79:xxi).

In the years following the 1967 Six-Day War, during which much Arab territory was seized by Israel, King Faisal voiced his complaints but took no other action because he doubted the sincerity of vows by other Arab leaders to fight for lost territory. In 1973, the Egyptian attack on Israeli forces and the unexpected unity of the Arab world made him willing to lock horns with the United States by imposing the oil embargo (46:74). Despite appeals by the United States for Saudi Arabia to lift the embargo, Faisal refused until the United States brought Israel into line. This embargo played a major part in the subsequent negotiations which resulted in the return of the Suez Canal and other captured territory to the Arabs. It also established King Faisal as a powerful leader in the Arab world, and his successor, King Khalid, has continued this role since Faisal's death (46:74).

Saudi Arabian Armed Forces

A brief overview of the Saudi Arabian Armed Forces (SAAF) is necessary in order to understand the importance of the impact of Peace Hawk. As of December 1976, studies compiled by the International Institute for Strategic Studies in London, England, reflected that the SAAF personnel totaled approximately 51,500. In addition to these forces, there were another 26,500 personnel in the National Guard, the Frontier Forces, and the Coast Guard. The

1975-1976 Saudi Arabian defense expenditure was in excess of $6.7 billion ($1 = 3.50 riyals). This amount represented a significant defense expenditure when compared to the estimated 1974 Gross National Product (GNP) of Saudi Arabia which was $24.8 billion (45:71-72).

The King, as the Commander-in-Chief of the Armed Forces, appoints a senior member of the royal family as the Minister of Defense and Aviation (MODA). The MODA exercises supervision and operational control over the Army, the Navy, and the Air Force as well as control of all civil aviation (79:325). Two deputy ministers, one for the armed forces and one for civil aviation, assist him. A High Defense Council was established by royal decree on July 25, 1961, with the responsibility of drawing up long range defense policy and of strengthening and upholding the standards of the armed forces (79:325). The King, the Ministers of Defense and Aviation, Interior, Finance and National Economy, Communications and Foreign Affairs, and the Chief of Staff of the Armed Forces are all members of this Council.

Saudi Arabia's armed forces are closely controlled by the King, perhaps with good reason. A high percentage of Saudi Arabia's technical elite, who are likely to favor more rapid governmental progress than the majority of the Saudi Arabian people, are contained in its military (9:40). An abortive coup was attempted by a considerable number of

military officers, particularly from the RSAF, in the summer of 1969 (40:15). Consequently, King Faisal isolated his army from population centers, imposed live ammunition restraints, ensured that his national guard (stationed close to the cities) was recruited largely from loyal Bedouin tribes, and dispersed loyal members of the royal family throughout the officer corps in order to prevent any future attempts to overthrow the government (40:59).

Saudi Arabia's armed forces have the conventional mission of protecting the country against invasion and also of restoring the internal security of the kingdom when necessary (79:324). Members of these armed forces exert little or no influence in the government, though many of the senior commanders of the armed forces are members of the royal family. A royal decree issued on March 20, 1960, stated that armed forces members were forbidden to express political opinions, engage in politics, or be members of societies or organizations with political doctrines or inclinations (79:325).

All modern weapons, heavy ammunition, transport, and training in the use of these implements must be obtained from foreign sources (79:326). As a result of this constraint, Saudi Arabia's armed forces have had strong foreign influence. The United Arab Republic and Great Britain were at one time the major sources of military assistance; however, the United States has been the

leading supplier of material and training to the SAAF since World War II (79:327). As a result, the organization and tactical doctrine of the Saudi armed forces has been patterned after those of the United States, and Saudi Arabian military planners have been strongly influenced by the assistance and training provided by the United States (79:328). The United States Military Training Mission in Saudi Arabia has played a prominent role in spreading this influence (79:331).

The dependence of Saudi Arabia on the United States for military assistance and the strong influence of the United States military structure have played a big part in the evolution of Peace Hawk. This will be seen in the following chapters. The remainder of this section will consist of a discussion of the individual services within the SAAF.

Saudi Arabian Navy (SAN). The SAN is the smallest of the SAAF, consisting of three fast patrol boats and approximately 1500 personnel (45:71). In addition, the Saudi Arabian Coast Guard has 50 small patrol boats and eight hovercraft which can be utilized to support naval operations (45:72). The Saudis are interested in expanding their navy as evidenced by current orders for more patrol boats, mine counter-measures craft, and landing craft. Negotiations with France for the purchase of frigates and

minesweepers have taken place, but the outcome of these negotiations is unknown at the present time (8:29).

Saudi Arabian Army (SAA). The SAA is the largest branch of the SAAF with a total of about 40,000 personnel. It is made up of one armored brigade, four infantry brigades, one parachute battalion, one Royal Guard battalion, three artillery battalions, and six anti-aircraft battalions (45:71). In addition to the regular Army, the Saudi Arabian National Guard (SANG) consisting of 20,000 personnel is utilized for internal security of the country (45:72). The SANG is used to guard the country's rich oil fields, to guard petroleum export facilities, to provide key bodyguard units for the royal family, and to supplement the Saudi Arabian Regular Army as required (55:8.1). Much of the training of the SAA and SANG has been provided by the United States. This arrangement is expected to continue with continued Saudi emphasis on modernization and self-sufficiency.

Royal Saudi Air Force (RSAF). Modernization and self-sufficiency are the goals of the Royal Saudi Air Force (80:21). At present, the RSAF consists of 96 combat aircraft and approximately 10,000 personnel (45:71). Many of these aircraft are of U.S. origin, consisting of F-5s purchased through Peace Hawk, C-130s, and KC-130s. There are also two squadrons of British Lightning interceptors

and various British trainers in the RSAF inventory (45:72). More F-5s, KC-130s, and French Mirages (purchased by Saudi Arabia for the United Arab Republic) are on order (45:72). In addition to these aircraft, Saudi Arabia has indicated an interest in purchasing the F-4 Phantom, the A-7 Corsair, and the F-14 Tomcat (8:30). Many RSAF pilots have received their flying training in the United States. A contract was signed in 1975 with the USAF for the training of 90 pilots and 1200 enlisted personnel over a three year period (80:21). Currently, the RSAF depends heavily on foreign technicians to keep its aircraft flying, and as more modern equipment is purchased the need for skilled personnel to maintain it will have to be met. Through training such as that indicated above, the RSAF hopes to be someday a modern self-sufficient arm of the SAAF, and this hope provides much of the motivation behind Peace Hawk.

Summary

Saudi Arabia is a country whose culture is deeply rooted in its history, religion, and geography. Its huge oil reserves have placed this desert kingdom in a position of world power. Profits from the sale of oil are being used to transform the semifeudal society into an industrial state, perhaps to be accomplished by the 1980's (14:51). The Saudis realize that their reserves of oil will not last forever and that nations dependent on them

for oil are striving to develop new sources of energy. Thus, the Saudis are trying to use their oil profits to develop an independent industrial base as rapidly as possible. The primary problem involved in accomplishing this goal has been the lack of qualified native personnel to follow through on the projects. As a result, Saudi Arabia has been forced to use foreign personnel to accomplish many of these projects. Despite this problem, Saudi Arabia is continuing its leap into the twentieth century. Saudi Planning Minister Isham Nazer stated in Newsweek (9:40): "Come back in a year and you'll see thousands of bulldozers and giant earth movers churning up new sites. Come back five years from now and you won't recognize the place."

CHAPTER III

EVOLUTION OF PEACE HAWK: PHASES I, II, AND III

The purpose of this chapter is to chronologically trace the development of Saudi Arabia's military connections with the United States from the early origins of Peace Hawk through the actual sale of F-5 aircraft and logistic support provided in Phases I, II, and III. Peace Hawk I and II mainly dealt with the sale of F-5B/E aircraft while Peace Hawk III consisted of extensive follow-on support for those aircraft. These three phases were covered extensively in an earlier thesis effort (SLSR 38-74B, by Leahy and Lynn); therefore, this chapter summarizes the principal parts of that thesis. Events associated with the completion of Peace Hawk I, II, and III that occurred after the previous thesis effort was terminated will be noted.

Origins and Background

Peace Hawk had its origin when the Saudi Arabian government decided to modernize the Royal Saudi Air Force (RSAF) by purchasing new fighter aircraft. The RSAF had five flying programs involving seven types of aircraft when this decision was made. These programs consisted of the British Lightning aircraft, the T-33/F-86 aircraft used in the RSAF training program, the Cessna 172 and the

British BAC 167 aircraft used at the King Faisal Air Academy, the C-130 transport aircraft, and helicopters (25:8). All maintenance for these aircraft, except for the T-33/F-86 aircraft, was provided by contract (25:8). (The Lightnings and BAC 167s had been purchased from the British in 1965 at an estimated initial cost of $280 million. This figure grew to approximately $500 million with the inclusion of spare parts and training for a period of ten years [79:333].)

Several aircraft which would have satisfied the Saudi desires for modern fighter aircraft were available on the international arms market. Among those available was an aircraft produced in the United States, the Northrop F-5 series. This aircraft had been designed specifically for Security Assistance Programs, to meet the demands of countries such as Saudi Arabia, and had not been developed with the intention of being included in the USAF inventory (25:9). (Some F-5s have been maintained by the USAF for training foreign pilots [54]. In addition, other F-5s are now being used by the USAF in the Tactical Air Command

[TAC] Red Flag Program[1] to simulate aggressor aircraft [3,42].)

At the time the Saudi Arabian government decided to obtain modern fighter aircraft, two models of the F-5 series were available, the F-5B and the F-5E. Together, these two models offered the RSAF a complete trainer/ fighter aircraft program (25:9).

The F-5B was a two seat version used primarily for pilot training and pilot proficiency, although it could be used in a limited combat role (54). As a single seat fighter, the F-5E had better air superiority capability, greater range, speed, fuel capacity, and was more maneuverable than previous F-5 series models (25:10). Production models of the F-5E, which was the most advanced model at that time, had not been assembled when the Saudis indicated interest in them (25:10). (The F-5F which was later purchased by the RSAF under Peace Hawk IV and VI was, like

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[1]Red Flag Program--This is a continuing training program developed by TAC to give aircrews the seasoning they need to increase their survivability in combat. Through this program, aircrews get their all important early "combat missions" under their belts. This is done not through participation in actual combat, but in a series of very realistic mock wars conducted over the Nevada desert where combat environments found in different areas of the world are accurately simulated. Not only does this training improve the capability of TAC's aircrews, it also gives other combat and support commands near equal time in developing their own tactics and expanding their operational capabilities [3:41].

the F-5B, also a two seat version. It was purchased mainly for training because the RSAF wanted a trainer that would more closely match the flight characteristics of the F-5E. In addition, the F-5F had a better combat capability than the F-5B and could be used in the laser target designator role [54].)

The Northrop Corporation was given permission by the Department of State to demonstrate the weapon system capabilities of the F-5 to the Saudi Arabian government. This demonstration was closely monitored by the United States Military Training Mission (USMTM) at Dhahran Air Base. The USMTM was responsible for assisting the Saudis in determining military requirements and for providing unbiased information on United States sources that could satisfy these requirements (25:11).

Peace Hawk I

Permission by the State Department for Northrop to demonstrate the F-5 to Saudi Arabia did not carry with it the right to enter into a sales agreement. Since the aircraft was a major end item, Saudi Arabia had to follow procedures listed in paragraph 3-3 of Air Force Manual 400-3, Foreign Military Sales, in order to make the purchase (see Figure 3). As a result, the Saudis requested through the USMTM that a Letter of Offer (LOA) be prepared for the purchase of F-5 aircraft (71:3-1). This request

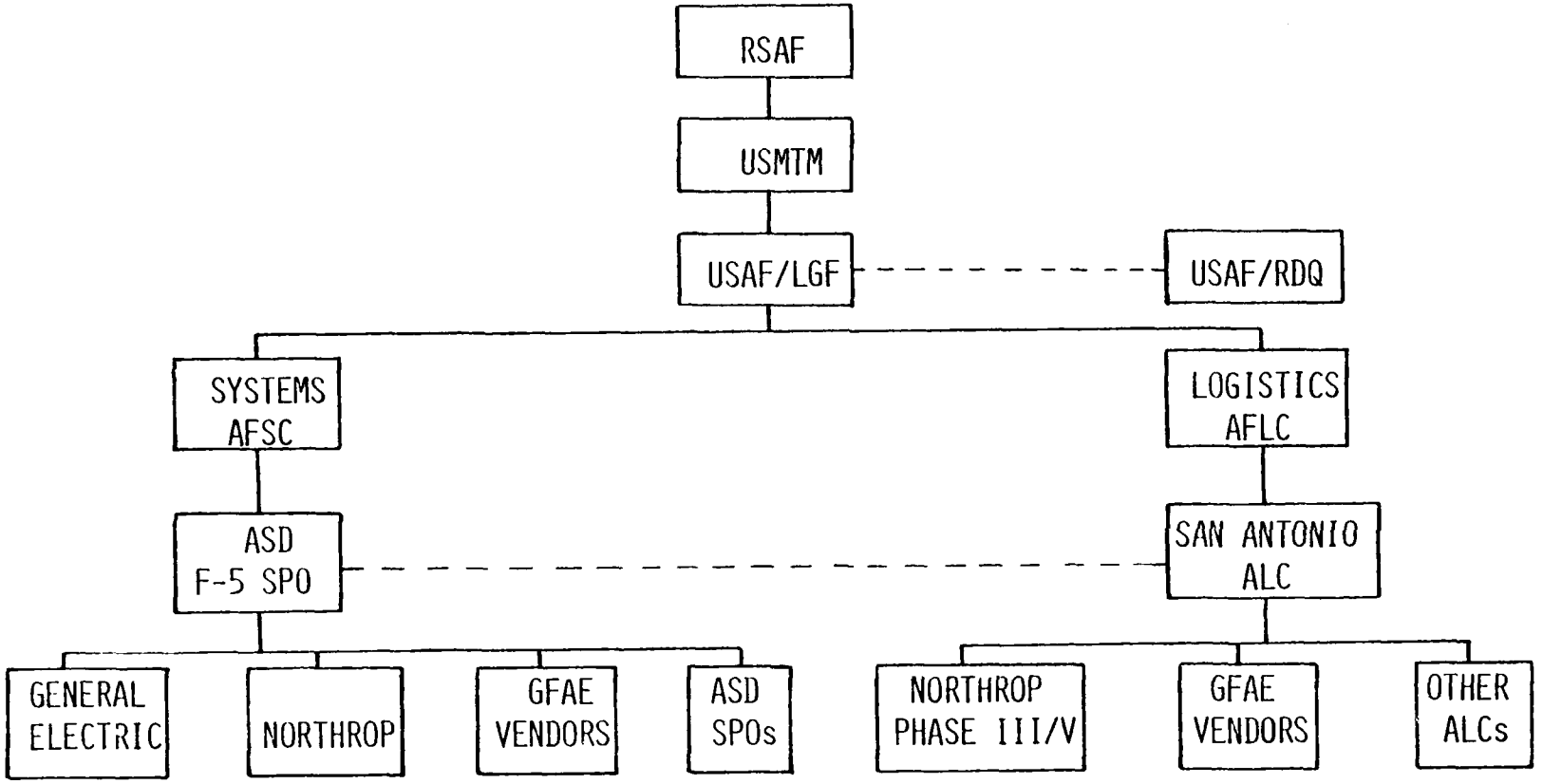

Figure 3

Peace Hawk System Relationships (49: Attachment 2, Page 3)

was simultaneously coordinated by the Department of State and the Department of Defense (DOD). Since the request involved aircraft that were not yet in the Air Force inventory, AFSC was directed by HQ USAF to obtain Price and Availability data on the aircraft (25:12). Price information was requested directly from the Northrop Corporation by the F-5 System Program Office (SPO) located at Wright-Patterson Air Force Base, Ohio. Northrop price estimates were adjusted by the SPO for factors such as inflation, and forwarded to HQ USAF for use in preparation of the LOA. The LOA was then prepared and submitted to the Saudi Arabian government for approval (25:14).

On 28 July 1971, Prince Sultan Bin Abdul Aziz, the Saudi Minister of Defense and Aviation (MODA), signed the LOA for approximately $42.3 million dollars (see Appendix A). Of this amount, approximately $25.2 million was for the purchase of 20 F-5B aircraft; the remainder of the money was to be utilized for support equipment[2], spares, technical orders (TOs), Mobile Training Sets (MTS), contractor technical support, and aircraft delivery (64). Contractor technical support was planned for a five-year period at a cost of $1.2 million dollars. At first, three Northrop and

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[2]The equipment was designated as "AGE" (Aerospace Ground Equipment) on the LOA. The same equipment is now designated "support equipment."

one General Electric product service engineers were to be provided, with reassessment of the requirements for their service to be accomplished after two years. This reassessment was later changed as a result of a USAF survey conducted in 1971 (25:15) which eventually led to Phase III of Peace Hawk.

The 20 F-5B aircraft purchased during Peace Hawk I replaced the aircraft utilized in the RSAF T-33/F-86 Operational Conversion Unit (OCU) program at Dhahran Air Base. The purpose of the OCU was to teach flight training graduates from the King Faisal Air Academy to fly fighter type aircraft. When the F-5Bs arrived, they became the OCU used to convert RSAF pilots to the F-5E aircraft (25:12). With the arrival of the F-5Es under the provisions of Peace Hawk II, the program was expanded and some of the F-5Bs were utilized in a tactical unit at Taif Air Base (25:13). No significant problems were encountered during this phase, and delivery of the F-5Bs was completed early in 1973 (54).

Peace Hawk II

The Saudi Arabian government went through the same processes for obtaining the LOA for Peace Hawk II as it had previously done for Peace Hawk I. As before, the F-5 SPO requested price data directly from Northrop, and then submitted it to HQ USAF for use in preparation of the LOA.

Prince Sultan Bin Abdul Aziz signed the LOA for Peace Hawk II (see Appendix B) on 29 September 1971 for $106.7 million. Of this amount, $56.8 million was for the purchase of 30 F-5E aircraft, and the remaining amount was utilized for the purchase of TCs, support equipment, spares, MTS, contractor technical support, and aircraft delivery (65). Contractor support under Peace Hawk II was different from Peace Hawk I in that the contractor support called for three Northrop and one General Electric product service engineers for a period of only two years (65). (Peace Hawk I called for contractor support for five years.) Contractor support provisions for Peace Hawk II, like those for Peace Hawk I, were changed when Peace Hawk III was implemented (25:15).

Peace Hawk II, unlike Peace Hawk I, did have some problems. These problems occurred as a result of aircraft configuration changes requested by Saudi Arabia after production of the F-5Es had already begun. These changes involved the installation of country-peculiar options consisting of an inertial navigation system (INS), an in-flight refueling capability, and a sophisticated Instrument Landing System in the aircraft. With the inclusion of these changes the value of Peace Hawk II was increased to $128.4 million. Because of these changes it was necessary to retrofit the first production models of the aircraft and to make assembly line changes for the others. Also because

of these changes the INS and the in-flight refueling system had to be flight tested by the USAF. Both systems were required to meet the same acceptance standards required for USAF aircraft. As a result of these changes, the first in-country aircraft delivery date was slipped from December 1973 to January 1974. The slippage did not, however, affect the overall delivery schedule which was completed in late 1974 (25:15-17).

Peace Hawk III

At the request of the RSAF, a USAF survey team was sent to Saudi Arabia during September and October of 1971 to assess total support requirements of the F-5 program. The team performed a physical survey of Dhahran and Taif Air Bases, and found extensive support augmentation and training required to insure the F-5 program's success (25:15).

As a result of the survey, the USAF formulated four proposals by which it could assist in the training of Saudi personnel. One proposal provided for 54 key RSAF maintenance and instructor personnel proficient in the English language to be trained in the U.S., for a follow-on USAF Mobile Training Team to deploy to Saudi Arabia for the purpose of advising and assisting, and for an RSAF Field Training Detachment to conduct classes in-country under USAF instructor guidance, following training in the U.S. The second and third proposals, designed to augment

contract maintenance, were variations of the first proposal, but provided less USAF support. The fourth proposal was that all training be conducted by a Contractor Training Team (25:18-20).

The Saudi government responded to these proposals by requesting that the U.S. provide the maintenance, training, and support required through an FMS program. The Saudis specified that the Northrop Corporation be designated the sole contractor (25:21).

Subsequent definitization meetings at HQ USAF established general guidelines for the contract support program, determined that the program should extend for a period of three years, tasked AFLC to develop work specifications/requirements, and set a target date of 1 February 1972 for completion of an LOA (25:21).

A 28-29 December 1971 meeting, which was held at HQ USAF for the purpose of reviewing preliminary Statements of Work prepared by AFLC and ATC, affirmed AFLC to be the USAF contracting command for the maintenance and training portions of the program, set HQ USAF milestones for the program, and resulted in the establishment of tentative aircraft utilization and operationally ready (OR) rates. The aircraft utilization rate was set at 20 hours per aircraft per month and OR rates were set as follows (25:24):

71% Operationally Ready

5% Not Operationally Ready Supply (NCRS)

21% Not Operationally Ready Maintenance (NCRM)

3% Miscellaneous

Program milestones set during the 23-29 December meeting called for transmittal of the completed LOA to Saudi Arabia on 1 February 1972, Saudi acceptance of the LOA by 9 February 1972, and the distribution of case directives by 16 February 1972. The San Antonio Air Material Area (SAAMA) (which has since been redesignated the San Antonio Air Logistics Center [SA-ALC]) was assigned complete responsibility for the Peace Hawk support program (which was designated Peace Hawk III) by HQ AFLC (25:24).

Though the milestone for Saudi approval of the LOA was delayed due to the Defense Security Assistance Agency (DSAA) requiring preliminary Saudi approval of a Depot Supply Support Plan (DSSP), the LOA was finally signed on 4 April 1972 (66).

The Northrop Corporation issued a Statement of Work for Peace Hawk III on 3 May 1972. The "Objectives" portion of the Statement of Work (SOW) stated that Northrop provisions would include the following (25:26-27):

1) Manpower, equipment, and facilities to perform organizational and intermediate level maintenance and logistics support required to enable the RSAF to operate

and maintain their F-5B/E aircraft, aircraft components, and associated support equipment in a serviceable condition.

2) An F-5 Pilot Training Team (PTT) to train RSAF pilots.

3) Two Contractor Technical Training (CTT) teams to perform technical training in F-5B/E organizational and intermediate maintenance, aircrew familiarization, and RSAF instructor development.

4) Required special purpose vehicles and their support. (This included two trucks, step vans, ramp sweepers, ramp trucks, and mobile control units.)

5) Design and construction of facilities to be used for aircraft and component maintenance, engine repair, and classroom training.

6) Personnel support services, including furnishings and supplies, for Northrop and USAF personnel.

7) English Language Training (ELT).

Construction of facilities. All facilities and equipment provided by Northrop during the contract period became the property of the RSAF upon completion of construction or delivery in-country. However, Northrop was given full right of use and occupancy on a rent-free basis during the period of contract performance. Construction performed by Northrop included new buildings, modification of existing structures, and the preparation of access roads at Dhahran

and Taif Air Bases. Projects which were given the highest priority for completion on both bases were the following (25:76):

1) Construction of an administration building.

2) Construction of an English language laboratory building.

3) Construction of a mobile training set building.

4) Modification of a maintenance hangar.

5) Construction of a conversion unit building.

6) Construction of an engine test cell.

Construction of the higher priority facilities at Dhahran and Taif Air bases began in August, 1972; the last of these facilities was completed in September, 1973. Projects of lower priority included access roads, inter- and intrabase communications, standby power, and furnishings. All construction plans were developed by the contractor and approved by the RSAF, USAF, and the U.S. Army Corps of Engineers prior to implementation (25:76-77).

Training. When these facilities were completed, the training programs began. The training programs were implemented by Northrop, with Air Training Command (ATC) providing all the necessary training materials and instructor training. The three categories of training provided were English Language training, pilot training, and technical training (25:79).

English language training. The objective of English language training was to develop English language proficiency enough to enable RSAF trainees to attend technical and pilot training and to make maximum use of technical data. English language training centers were established at both Dhahran and Taif Air Bases. Each center was capable of accommodating 30 students seated at individual booths equipped with language training equipment. Each center provided staffing for a student/instructor ratio of 10:1 (25:80).

English comprehension levels (ECL) necessary for subsequent entry to pilot and technical training programs were as follows (25:81):

Pilot training - 80

Technical training

Mechanical skills - 65

Electronic skills - 70

Instructor training - 75

ELT was offered at three levels of instruction. A self-pacing entry level course, designed for students with little or no knowledge of the English language, had a course-length of four to thirty-two weeks and required an ECL of 40 for graduation. A self-pacing intermediate level course, designed for students who already possessed a good background in English, had a duration of four to nineteen weeks and required an ECL of 65, 70, 75, or 80

(depending on the subsequent technical training the trainee was to undergo) for graduation. The third level of ELT consisted of separate terminology courses designed to teach the specialized vocabularies required in pilot training, basic electronics, maintenance, supply, and munitions (25:81).

Pilot training. Pilot training was conducted in-country by a Northrop Pilot Training Team which utilized a program developed by ATC (with TAC assistance) for F-5 training. Northrop instructor pilots were required to receive training in the F-5 aircraft at Williams AFB, Arizona, in order to qualify to instruct in the Peace Hawk program (25:82).

Technical training. The technical training program, conducted by two CTTs at Dhahran and Taif Air Bases, consisted of F-5B/E maintenance, aircrew familiarization, and instructor development subprograms which were provided through a combination of formal classroom instruction and on-the-job training (OJT). Formal instruction was conducted in two mobile training sets, one a mock-up of the F-5B aircraft, and the other a mock-up of the F-5E aircraft. The OJT program was similar to the USAF OJT program. Contractor maintenance support teams were responsible for performing organizational and intermediate level maintenance on the aircraft, and for supervising OJT of assigned RSAF

personnel. Contractor supply specialists were responsible for operating F-5 supply systems and for supervising OJT of RSAF personnel assigned to the supply activity, which was operated in accordance with USAF Manual 67-1 as adopted by the RSAF (25:85).

Summary

Peace Hawk grew out of the desire of the Saudi Arabian government to modernize the RSAF through the purchase of new fighter aircraft. Under Peace Hawk I and II, the RSAF acquired modern fighter aircraft by purchasing 20 F-5B and 30 F-5E aircraft. The primary objective of Peace Hawk III was to assist the RSAF in achieving maximum self-sufficiency in the operation and support of their F-5B/E aircraft. Under Peace Hawk III, the RSAF acquired contractor support of those aircraft, in order to be able to fully utilize the aircraft as they arrived in-country. The contractor, Northrop Corporation, constructed and modified required facilities at Dhahran and Taif Air Bases, conducted English, pilot, and technical training for assigned RSAF personnel, and performed required maintenance and supply support while training RSAF personnel to assume these duties. Peace Hawk did not, however, terminate at the end of three phases. Three more phases, two involving the purchase of more aircraft and one involving additional support, have been added. Their significance and impact on Peace Hawk will be discussed in Chapter V of this thesis.

CHAPTER IV

PEACE HAWK MANAGEMENT

The purpose of this chapter is to discuss the management structure and responsibilities of the organizations which have played important roles in meeting the objectives of the Peace Hawk Program. Organizations that will be discussed include the DOD, HQ USAF, AFSC, AFLC, SA-ALC, SA-ALC Detachment 22 (Det 22), the United States Military Training Mission (USMTM) in Saudi Arabia, the Northrop Corporation, and the RSAF Peace Hawk Project Office.

Department of Defense

DOD management involvement in Peace Hawk has consisted largely of providing policy and guidance. By law, the Secretary of Defense has been responsible for military aspects of security assistance and, consequently, FMS and Peace Hawk (76:11-1). To aid the Secretary of Defense, the Assistant Secretary of Defense, International Security Affairs (ASD/ISA), has had prime responsibility for formulating DOD Security Assistance programs, plans, policies, and priorities (76:11-3). The ASD/ISA also has been responsible for negotiations with foreign governments. Implementation of approved Security Assistance programs established within the policy guidelines provided by the

ASD/ISA has been directed, administered, and supervised by the Defense Security Assistance Agency (DSAA) (76:11-3). Under the direction and supervision of DSAA, the administration of FMS programs can be delegated in whole or in part to Military Departments (25:46). This has been the case with Peace Hawk. Since the beginning of Peace Hawk, the Saudi Arabian government has desired that the program be managed by the USAF, and the U.S. Government has consented to those desires (33:7-3).

Headquarters United States Air Force (HQ USAF)

In accordance with USAF FMS management philosophy, the overall direction of the Peace Hawk Program has been retained at HQ USAF, and the USAF organization most directly involved with items peculiar to the particular Peace Hawk phase has been assigned management responsibility (71:5-20; 33:7-3) (see Figure 4).

The Chief of Staff, USAF, has been responsible for the development, implementation, and management of FMS activities delegated or directed to the Air Force by the DOD (71:4-1). Below the Chief of Staff, the Directorate of Military Assistance and Sales (HQ USAF/LGF) was designated as the Office of Prime Responsibility for all USAF FMS activities (33:7-4). The responsibilities of HQ USAF/LGF have been as follows (71:4-1):

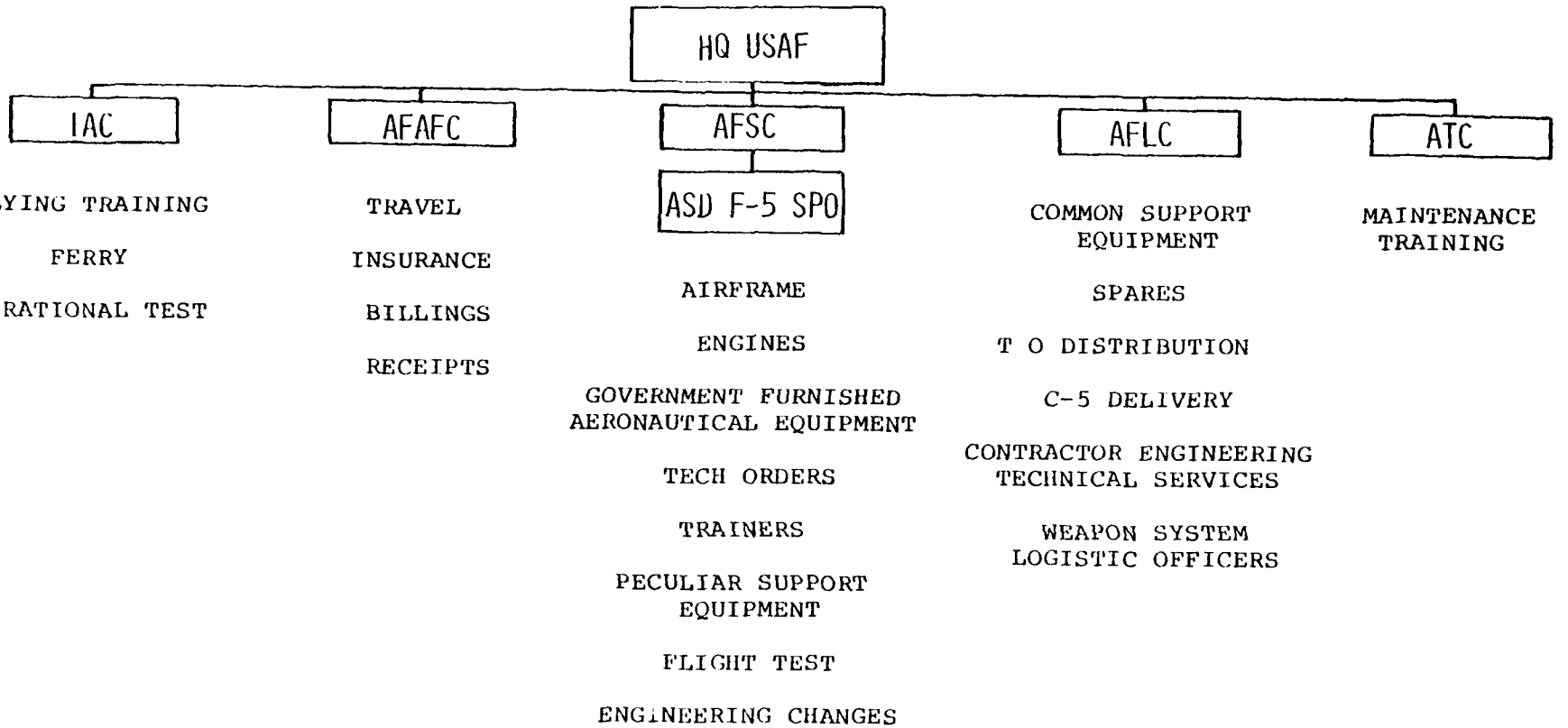

Figure 4

Peace Hawk Major Command and Agency Responsibilities (54)

1. Implements DOD policy and directives on FMS.

2. Assists the Office of the Secretary of Defense in Government to Government negotiations for the sale of USAF military equipment or services.

3. Develops policies and procedures for the conduct of FMS.

4. Directs, administers, and supervises FMS in the USAF.

5. Provides the information on cost, delivery, source of supply, and funding requirements as required by eligible recipients for development of purchase plans or programs.

6. Directs delivery of the articles and provision of services in accordance with the terms and conditions of the sales agreements.

7. Keeps the Unified Commands, Military Assistance Advisory Groups (MAAGs), Missions, and Attaches advised of the status of weapon systems, training, logistics, and other information needed to assist eligible purchasers in planning purchase programs.

8. Considers, when appropriate, the security classification of equipment and technical orders, as well as the National Disclosure Policy.

A Peace Hawk Program Office was established within HQ USAF/LGF to serve as the focal point for direction and coordination of all material, services, weapons, and

training provided by Peace Hawk. Additionally, the Peace Hawk Program Office has been responsible for the implementation of all program plans, program management, and the dissemination of policies and procedures affecting Peace Hawk. Coordination and assistance also have been provided to the Attache, the USMTM, and Northrop (33:7-4).

Major Command Responsibilities

As a result of the diverse nature of programs involved in Peace Hawk, HQ USAF assigned responsibility for the different phases of Peace Hawk to the USAF major command most directly involved with items peculiar to each phase. Peace Hawk Phases I, II, IV, and VI, which primarily involved the sale of new aircraft to the RSAF, have been chiefly the responsibility of AFSC, with AFLC providing logistics support (58). Peace Hawk Phases III and V, which consisted primarily of logistic support and services, have been the responsibility of AFLC (58).

Some of the responsibilities of AFSC and AFLC in managing each of the Peace Hawk Phases included (33:7-4):

1. Conducting price and availability (P&A) studies for the various phases.

2. Implementing accepted and directed cases relating to Peace Hawk.

3. Administering and managing funds made available for Peace Hawk.

4. Establishing controls, reports, and management procedures to ensure the fulfillment of USAF obligations under Peace Hawk.

5. Performing prescribed accounting and reporting.

6. Ensuring that items were inspected prior to shipment to Saudi Arabia.

7. Managing Peace Hawk cases to completion from receipt to the final accounting, closing, and retiring of the case.

8. Establishing necessary controls to ensure that classified information was not released until proper clearance was received.

9. Processing discrepancy reports.

Air Force Systems Command (AFSC)

AFSC is responsible for the research, development, testing, evaluation, procurement, and production of Air Force missiles, aircraft, and related hardware (33:7-5). Under HQ USAF direction, AFSC responded to the requirements of Peace Hawk phases involving procurement of new aircraft. AFSC responsibilities for Peace Hawk were delegated to the Aeronautical Systems Division (ASD) at Wright-Patterson AFB, Ohio. Within the ASD, the International Fighter Aircraft Systems Program Office (SPO) was assigned responsibilities associated with the acquisition, development, and production of F-5B/E/F aircraft (33:7-5).

The SPO is organized as shown in Figure 5 and includes specialists from different functional areas as well as representatives from AFLC. Organization of the SPO has changed recently to a matrix type organization. Dotted lines from the different functional areas mean that the persons within them, although colocated and working for the SPO, actually belong to the same functional area at another level in the ASD (54). The Deputy for Logistics, who is responsible for spares and support equipment for the system, reports to the F-5 systems manager at the San Antonio Air Logistics Center (54). Persons in the functional areas indicated by the dotted lines are shifted temporarily to different organizations in the ASD as the workload in those organizations increases. This shifting of personnel is an attempt to give more flexibility and to increase efficiency in the ASD organizations as workloads vary. Though this type of organization has been more efficient, it has hurt the SPO because of the loss of personnel with FMS experience (54).

Responsibility for the procurement of the aircraft, spares, and equipment peculiar to Peace Hawk was assumed by the SPO. This responsibility began with Saudi requests for F-5B/E/F aircraft which were transmitted through normal channels (see Figure 3, page 55) to the SPO. Price and availability (P&A) data for the aircraft was developed by the SPO in conjunction with Northrop (54). Northrop

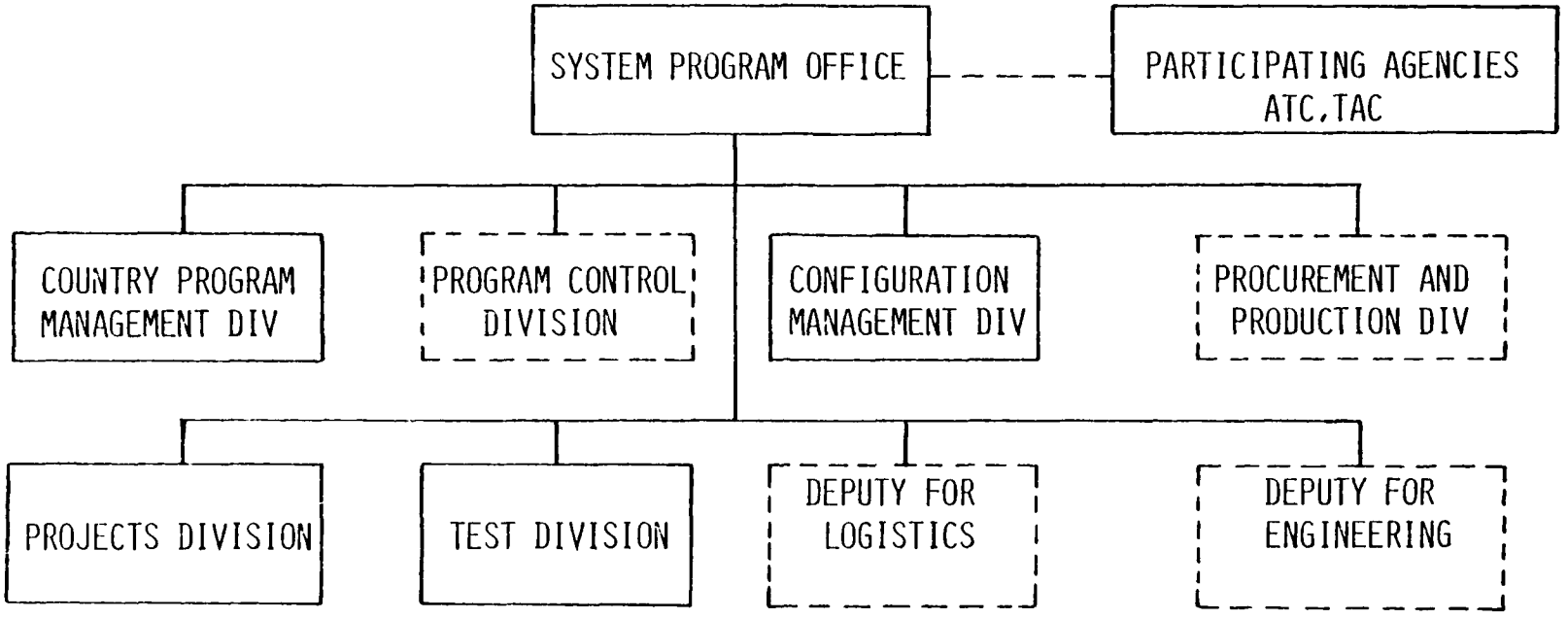

Figure 5

Organizational Chart, International Fighter SPO (54)

developed a not-to-exceed price for the aircraft, and finance experts from the SPO evaluated Northrop's data for accuracy. If there were problems, the data was adjusted as necessary. P&A data was fully coordinated by all functions in the SPO before being forwarded along with necessary P&A data from AFLC to HQ USAF/LGF for inclusion in the LOA. Finally, the LOA was submitted through the USMTM for RSAF consideration (54).

Management by the SPO also included procurement and testing of the peculiar subsystems for the aircraft as well. This management required coordination and planning with Northrop and with the Flight Test Center at Edwards AFB, California, which provided the flight testing of the aircraft and the RSAF peculiar systems (54). Management efforts by the SPO enabled the unique requirements of Peace Hawk IV to be met with a minimum of delay.

Air Force Logistics Command (AFLC)

AFLC has had primary responsibility for Peace Hawk Phases III and V, which have consisted of many logistic support cases. The main role of AFLC during Peace Hawk Phases I, II, IV, and VI has been one of providing ground support equipment and spare parts for the purchased weapons systems.

AFLC Staff Offices. AFLC has been heavily involved in Peace Hawk Phases III and V, for which it was assigned

primary responsibility by HQ USAF (see Figure 6). Though the AFLC Commander, in turn, delegated primary AFLC responsibility for Peace Hawk to the SA-ALC Commander, Kelly AFB, Texas, the following HQ AFLC staff offices also have Peace Hawk management responsibilities.

The AFLC Assistant to the Commander for International Logistics (AFLC/MI) has two offices, Policy (MIX) and Programs (MIJ), which function in policy and special projects roles, respectively. HQ AFLC/MIJ has financial responsibility for the USAF services case, SR-GAS, and is the OPR for special Saudi projects such as the Reporting Analysis Planning System (RAPS), the Allied Recoverable Requirements Computation System (ARRCS), Logistics Management Institute (LMI) Studies, and TELEX communication. FMS policy emanates from HQ AFLC/MIX for all FMS matters. The management efforts of these offices on behalf of Saudi Arabia are funded from a special Peace Hawk case, SR-GAS, which was established to provide Saudi Arabia with management assistance beyond that which the administrative surcharge warrants (58).

Another AFLC deputate which has been involved in the management of Peace Hawk Phases III and V has been the Overseas Contract Management Center (AFCMC). This HQ AFLC office previously possessed organizational responsibility for Det 22 and its in-country contract management function, but has relinquished this control to SA-ALC as a result of

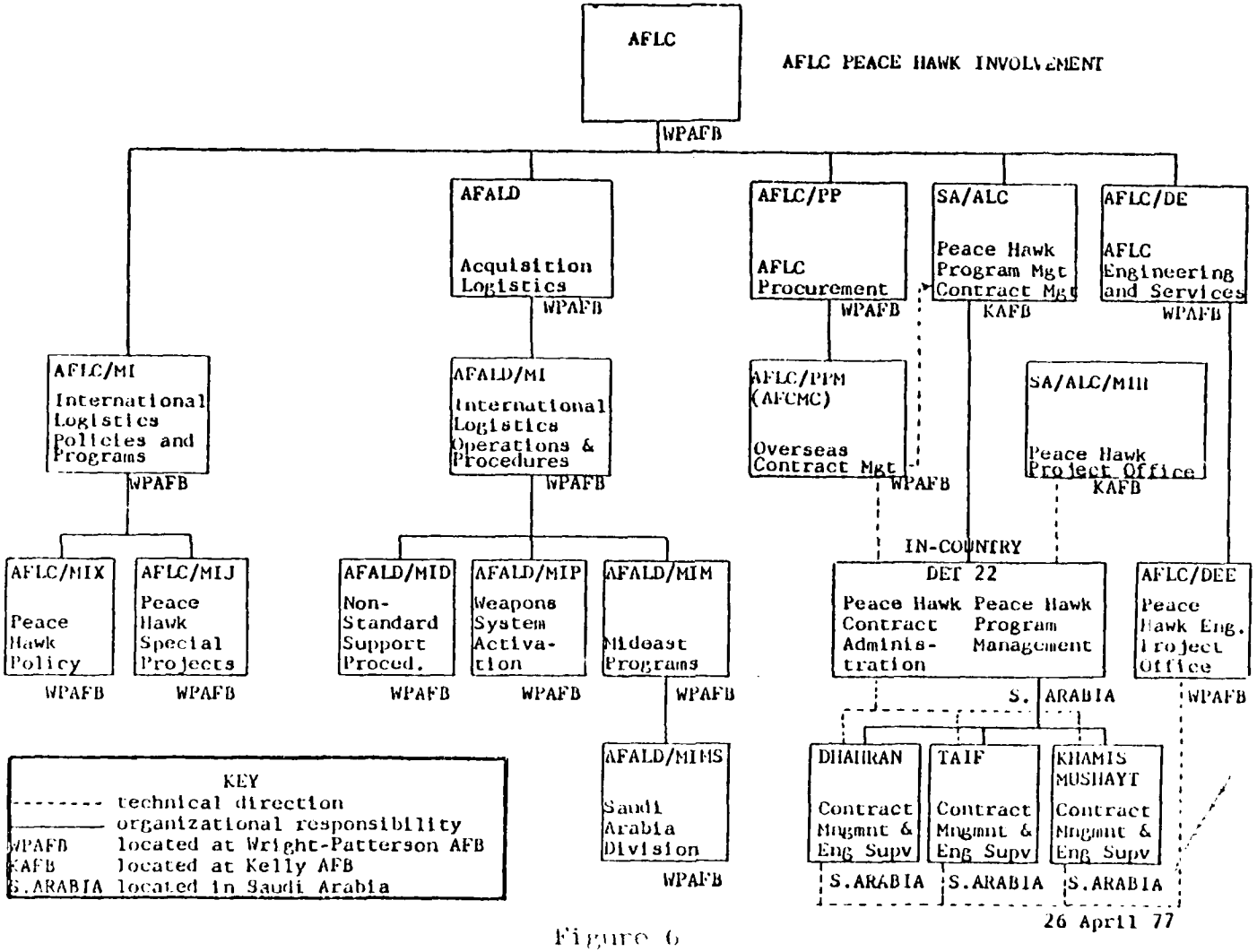

Figure 6

AFLC Peace Hawk Involvement (58)

Saudi desires for single management of Peace Hawk contract and program matters. AFCMC currently provides technical direction to Det 22 and its contract management personnel located at each of its three in-country operating locations (C/L) (27). AFCMC Peace Hawk program management efforts are funded from SR-GAS case funds.

A third AFLC deputate involved with Peace Hawk Phases III and V is Engineering and Services (AFLC/DE). Its Directorate of Engineering (AFLC/DEE) is responsible for supervising the management of all construction aspects of Peace Hawk. AFLC/DEE provides technical direction to Det 22 and to contract management personnel located at each in-country C/L. AFLC/DEE Peace Hawk management efforts are funded by SR-GAS case funds (16).

Air Force Acquisition Logistics Division (AFALD). The AFLC Commander has assigned to the Acquisition Logistics Division Deputy for International Logistics (AFALD/MI) the responsibility for FMS non-standard support procedures, the responsibility for initiating stock level cases, and the responsibility for day-to-day management of support cases. Responsibility for FMS non-standard support procedures has been further delegated to the Directorate of Systems and Procedures (AFALD/MID); responsibility for initiating stock level cases has been further delegated to the Directorate of Weapons Systems Activation (AFALD/MIP); and

responsibility for the day to day management of support cases has been further delegated to the Directorate of Mideast Programs (AFALD/MIM). Peace Hawk requisitions are channeled through the AFALD/MIM Saudi Arabia Division (AFALD/MIMS) for tracking and financial management. The management efforts of these offices on behalf of Saudi Arabia are funded by an administrative surcharge (normally two to five percent) applied to the FMS cases to pay for USAF administrative support (24).

San Antonio Air Logistics Center (SA-ALC). The AFLC agency with the largest share of Peace Hawk responsibility is SA-ALC, located at Kelly AFB, Texas. The Commander of SA-ALC has been fully responsible to the Commander of AFLC for the overall management of Peace Hawk III and V. The Commander of SA-ALC has, in turn, established two program management elements. He designated one of these elements, SA-ALC Det 22 to be the primary SA-ALC Peace Hawk program manager. Det 22 is located in Al Khobar, Saudi Arabia, which is on the outskirts of Dhahran. The other element, a CONUS Peace Hawk management office (SA-ALC/MIH) is located at Kelly AFB in San Antonio, Texas. It has been responsive to Det 22 for coordinating, implementing, and managing Continental United States (CONUS) activities required to support the Peace Hawk III and V programs (43). Det 22, which once functioned only in a contract management

role and was subordinate to the AFCMC, currently possesses both program and contract management personnel and is organizationally responsible to SA-ALC, though its contract management personnel continue to receive technical direction from the AFCMC (MCA). The procuring contract officer (PCO) is located at Kelly AFB, but delegation of authority, to include funding, has been made to the administrative contract officer (ACO) in Saudi Arabia (43). Contract management personnel are funded by administrative surcharge money and program management personnel are funded by SR-GAS case money.

SA-ALC Detachment 22 (Det 22). Det 22 maintains surveillance over each work element accomplished by contractors to assure compliance with all terms of the contract. When construction is involved, services of the U.S. Army Corps of Engineers (COE) are often utilized. Det 22, together with the USMTM, assists the RSAF in preparing proposed changes to the Program Description, a document which is updated frequently to reflect the current status of Peace Hawk programs. Such changes are normally negotiated among RSAF, USMTM, and Det 22 personnel for effectiveness and possible cost impact. Det 22 personnel contact Peace Hawk Project Officers directly to resolve problems concerning RSAF participation in the Peace Hawk [illegible] currently has 17 program management [illegible]

management personnel authorized for the four locations, Al Khobar and the three O/Ls, Dhahran, Taif, and Khamis Mushayt (43). Funding of contract management activities is accomplished through FMS case administrative surcharges, and funding of program management activities is provided by FMS case SR-GAS.

Other Commands

Three other Air Force major commands--Military Airlift Command (MAC), Air Training Command (ATC), and Tactical Air Command (TAC)--also have participated in Peace Hawk.

MAC provided airlift of Peace Hawk materials and F-5B/E/F aircraft (33:7-8).

ATC's role consisted primarily of the following (33:7-6):

1. Providing availability data on formal training classes (technical, pilot familiarization, and undergraduate flight training) and familiarization job training.

2. Providing Mobile Training Assistance (Mobile Training Teams and/or Mobile Training Detachments).

3. Recommending adequate and proper training courses and/or equipment.

TAC had the responsibility for F-5 Tactical Fighter Pilot Qualification Training and F-5 Instructor Pilot Training in the United States. Additionally, TAC pilots flew the test flights of the RSAF aircraft at Edwards AFB,

California. Mobile training assistance in the form of TAC Instructor Pilots was provided to the RSAF as needed to help initiate in-country flight training programs (33:7-6). Finally, TAC acted as the "Surrogate"[3] Using Command for the Peace Hawk IV flight simulators (18).

United States Military Training Mission (USMTM)

One of the key roles in Peace Hawk has been that of the USMTM located in Saudi Arabia (33:7-9). The Commander of the USMTM, as senior DOD advisor to the Saudi Arabian MODA, has insured close coordination and effective working relations among the RSAF and various organizations participating in Peace Hawk. This relationship was necessary for successful program implementation, effective support of RSAF operational training, and the necessary tie-ins with other RSAF modernization programs (33:7-9).

The Air Force Section (AFSEC) of the USMTM had single point responsibility for all dealings with the RSAF in negotiating and implementing weapon system acquisition and logistic management activities connected with Peace Hawk (33:7-9). This responsibility included the following (71:4-3):

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[3]A Surrogate Using Command acts for and in the place of the actual user. The idea is that the interaction of the surrogate and the developer (SPO) will produce the best systems of checks and balances within the constraints imposed by cost (18). In this case, TAC acted for the RSAF to assure that the simulators met RSAF requirements.

1. Providing assistance and information to the RSAF in requesting and planning Peace Hawk FMS Programs.

2. Actively searching for opportunities where equipment, supply, training, and maintenance problems could be solved by long term arrangements, thus reducing case-by-case transactions.

3. Maintaining liaison with the RSAF during the "Decision to Buy" period.

4. Assisting the RSAF in actual negotiation of the Peace Hawk FMS programs.

5. Advising and acting as liaison between the RSAF and USAF on FMS matters.

Northrop Corporation

The Northrop Corporation has overall contractor responsibility for the Peace Hawk Program, under the surveillance of the Commander of SA-ALC. Northrop has delegated this responsibility to its Northrop Aircraft Group (NAG). Peace Hawk Phases III and V have been further delegated to a Vice President and Program Manager of Saudi Arabia Operations, who is currently completely responsible for satisfying all Peace Hawk V contract requirements, and who serves as Northrop's principal point of contact with the USAF and the RSAF. The Program Manager is assisted by two Deputy Program Managers, one located in-country and the other located at Hawthorne, California (35:1-2).

Of the in-country management functions subordinate to the Program Manager, three of particular note are Training and Operations, Program Support and Administration, and Construction and Services. Training and Operations Management accomplishes RSAF training, maintenance, supply, and support functions; it coordinates RSAF trainee phase-in and Northrop personnel phase-out. Program Support and Administration Management provides overall program plans; its functions include contracts and pricing, subcontracts and procurement, finance, systems management, administration, and quality assurance. Construction and Services management accomplishes surveillance of all technical, housing, and community support facility construction being accomplished under subcontract to the NAG; it coordinates and monitors the transportation of all construction materials, the implementation of radio and telecommunication requirements, and the performance of personnel support services (35:1-4 through 1-11).

Northrop has subcontracted the design and construction of Peace Hawk V technical facilities to the George A. Fuller Company (GAFCO), a Northrop subsidiary, and has subcontracted the design and construction of Peace Hawk V housing and community facilities to the Tumpane Company (TUMCO). Interfacility and interbase communication services required by the Peace Hawk V contract have been subcontracted to Page Communications Engineers, Inc.,

another Northrop subsidiary. Computerized logistics services, including the tracking of supply requisitions, have been contracted by Northrop Worldwide Aircraft Services (NWASI) (35:1-4 through 1-11).

The CONUS management functions which have been delegated by the Program Manager to the Deputy Program Manager, Hawthorne Operations, include the following (35:1-11):

1. Maintaining Peace Hawk IV aircraft production, shipment, and support overview for Peace Hawk IV and V integration requirements.

2. Procurement, packing, and shipping of aircraft support items.

3. Shipment of technical facility furniture and equipment items.

4. Employing personnel for Peace Hawk assignment.

5. Training Northrop personnel prior to their assignment to Peace Hawk training duties.

6. Subcontractor progress payment support.

7. Budget administration.

RSAF Peace Hawk Project Office

Program control by the RSAF has been exercised through the HQ RSAF Chief Peace Hawk Project Officer and RSAF Peace Hawk Project Officers located at Dhahran, Taif, and Khamis Mushayt Air Bases (54). These Project Officers have kept the Commander of the RSAF informed on the status

of Peace Hawk, and coordinated RSAF recommendations with the USMTM and Det 22 (58). The RSAF Peace Hawk Project Officers also contact Det 22 personnel, on a day-to-day basis, regarding recommendations for minor changes to contractor or Det 22 operations (33:7-3).

Summary

Peace Hawk has had many participants including the Office of the Secretary of Defense, HQ USAF, various USAF commands and organizations under them, the USMTM, Northrop, and the RSAF. From the broad policy outlined by the Secretary of Defense to the day-to-day operations in-country, Peace Hawk's uniqueness and complexity have demanded management flexibility and foresight by these organizations in order to help ensure accomplishment of its objectives. Without this management flexibility and foresight, the present success of Peace Hawk would not have been possible.

CHAPTER V

PEACE HAWK: PHASE III EXTENSION AND PHASES IV, V, AND VI

The purpose of this chapter is to chronologically relate the evolution and major events of Peace Hawk Phase III Extension and Phases IV, V, and VI. Emphasis is placed on the major events, problems, and management decision necessary for ensuring the successful achievement of the objectives of each phase. Peace Hawk III Extension and Phase V, which mainly consisted of management, maintenance, training, supply augmentation, and facilities construction necessary for RSAF modernization and self-sufficiency with respect to the F-5 aircraft, and Phases IV and VI, which involved the sale of additional F-5Es and Fs, will be discussed in detail.

Peace Hawk III Extension

The Peace Hawk III contract (which provided the Saudis with assistance in maintaining their Peace Hawk I and II aircraft) was scheduled to expire on 15 August 1975. Peace Hawk V was supposed to be contracted prior to the termination of Peace Hawk III in order to continue this service. On 13 September 1974, a joint USAF/Northrop team completed three weeks of fact gathering in Saudi Arabia

designed to assist AFLC planners in developing a Peace Hawk V support package tailored to meet increased Saudi needs and desires (39). Several major construction and remodeling projects for supply and munitions facilities were formulated for Dhahran and Taif Air Bases, training programs were outlined, and construction of depot supply facilities at Dhahran were planned. An automated logistics data system which would be a modification of the existing Page Real-time Information Systems for Management (PRISM) at Fort Rucker, Alabama, was envisioned for the RSAF. This system was to include one computer in Saudi Arabia and another in the U.S., and was to be accessed and utilized in both countries. In the U.S., it was to be tied in to the AFLC automated computer system, the HO-51 (17).

Peace Hawk V definitization attempts. An initial Peace Hawk V proposal was briefed to HQ AFLC on 13 February 1975 (59), and an effort was made on 18 March 1975, after a week of discussions with the RSAF, to document in a Memorandum of Understanding (MOU) all additions, deletions, and changes requested by the RSAF (72). By the latter date, the original list of Dhahran and Taif Air Base construction and renovation projects, which had been planned for Peace Hawk V, had been greatly increased in number by the Saudi Arabian government. Construction at an additional base, Khamis Mushayt, had been added as well. Two wing

headquarters buildings, a base headquarters building, survival training facilities, a squadron operations building, a photo lab, and an avionics shop were among the listed additions desired by the Saudis. Computerization of the RSAF logistics system was included in this MOU, with the provision that it "may be deleted from this offer as late as 1 July 75 without cost impact [72]."

Peace Hawk III extension. At a meeting in the Pentagon a month later (28-29 April 1975), General Ahmann, Chief of the USMTM in Saudi Arabia, stated that the Saudis still were not fully settled on the services they wanted incorporated into Peace Hawk V, that further extensive in-country negotiations would be required, and that not-to-exceed (NTE) cost estimates being prepared by the contractor should be in a detailed cost breakout form in order to facilitate the Saudi decision (36). General Ahmann suggested that establishment of a contingency fund for handling cost over-runs would be acceptable to the Saudis, and he recommended a six month extension of Phase III (15 August 75 - 15 February 76), as opposed to a one year extension recommended by AFLC and Northrop. It was his feeling that a six month extension would be adequate time to definitize areas of support being requested by the Saudi government (36).

The Letter of Offer (LOA) for the six month extension of Peace Hawk III was briefed to the RSAF in Saudi

Arabia in June of 1975, and was signed by the Saudi Minister of Defense and Aviation (MODA) on 29 July 1975. The LOA provided for funds in the amount of $116,417,000 for contractor technical services and facilities, and an additional $775,000 (a two percent surcharge) for USAF contract administration (31). The contract provided for continuation of Peace Hawk III support in increased amounts; it provided additional funds for services required for orderly transition to Peace Hawk V, including long term procurement of equipment and materials and long term leasing required for Peace Hawk V; it did not include funds for the continuation of Northrop pilot training services, which had been completed under Peace Hawk III; and it included funding for the movement of San Antonio Air Logistics Center (SA-ALC) Detachment 22 (Det 22) in-country headquarters from Al Khobar to Riyadh, a plan which was later discarded (31).

Reorganization of Det 22. Thoughts of reorganizing SA-ALC Det 22 for FMS support of Saudi Arabia originated with an 11 Nov 1974 letter from Northrop's General David Burchinal (Ret.) to General Richard Ellis, Vice Chief of Staff, USAF, which complained of "a confusing organizational arrangement" of USAF representatives in Saudi Arabia. This letter pointed out a lack of program management representatives in-country, the fact that in-country contract management

representatives reported not to SA-ALC but to the Air Force Contract Management Center (AFCMC), and the Saudi desire to deal directly with a single point of authority for both program and contract management (5). Though the return letter from General Ellis asserted that Saudi desires to deal directly with Det 22 conflicted with "OSD [Office of the Secretary of Defense], JCS [Joint Chiefs of Staff], CINC [Commander in Chief], and country team [U.S. personnel in Saudi Arabia functioning under the authority of the U.S. Ambassador to Saudi Arabia] desires [13]," and that SA-ALC did, in fact, exert control over Det 22 on contract matters, the thought that improvements to the USAF organizational arrangement in-country might be a good idea was not dismissed quickly. During a 13 Feb 1975 Peace Hawk V program presentation to the AFLC staff by SA-ALC, General Klong (AFLC/MM) requested that SA-ALC study AFCMC/Det 22/Program manager relationships and advise AFLC of any changes required to support Peace Hawk V. Subsequent discussions with USMTM (General Ahmann), HQ USAF/LGF, AFLC/MM (General Post), the RSAF (Generals Zuhair and Khoja), and others prompted SA-ALC (General Kelly) to propose to AFLC on 2 May 1975 that staffing in the San Antonio Program Management Office be increased, and that a Program Management Office be located in-country (23). Though this in-country Program Management Office was first envisioned for location in Riyadh (in keeping with procurement policy of separating

procuring functions from contract administration functions), it was later established in Al Khobar and placed under the operational responsibility of the SA-ALC Det 22 Commander (41). Currently, 17 Peace Hawk program management personnel and 52 contract management personnel are colocated in Al Khobar, functioning under the direction of SA-ALC (58).

Continued Peace Hawk V definitization attempts. As a result of the continuing changes in provisions to be incorporated into Peace Hawk V, a revised Peace Hawk V program description was developed to reflect a realignment of required and optional contract items to be briefed to the Saudi government. By 3 June 1975, however, construction pricing, which had caused considerable difficulty, had not yet been accomplished. Northrop was reluctant to provide estimates for construction other than that necessary to house Northrop in-country employees (59). Though Northrop had undertaken construction responsibilities under Peace Hawk III in order to maintain the Peace Hawk single manager concept desired by the Saudi government, construction responsibilities under Peace Hawk V had grown to almost 20 times that of Peace Hawk III (16). Northrop felt uncomfortable working out of its primary area of expertise, and had experienced difficulties working under the supervision of the Army Corps of Engineers (COE) during Peace Hawk III. Northrop felt that the COE, which

had possessed the authority to halt construction at will under Peace Hawk III, had not shown concern for Northrop's timetable for completing facility construction prior to aircraft deliveries. The COE estimated Peace Hawk V construction, if placed under its supervision, would take 13 months longer to complete than programmed (16). Also, Northrop Airport Development Company (NADC), the Northrop subsidiary which had accomplished Peace Hawk III construction, had incurred significant financial losses as a result of similar construction ventures in Bangkok, Singapore, and elsewhere, and was phased out as a Northrop enterprise (57).

In San Antonio, on 9 May 1975, Northrop representatives presented the SA-ALC Procuring Contracting Officer (PCO) a letter stating Northrop's decision not to enter into any other construction programs as a prime contractor nor as a subcontractor. At first, there was some indication that Northrop might be persuaded to continue its construction role under some derivative of a cost plus fixed fee contract (57). AFLC then made a proposal to the Air Staff, which was disapproved, to delete the role of the COE in Peace Hawk V construction (16). An agreement suitable to both parties later emerged from Northrop/USAF discussions in Washington, D.C., whereby Northrop's subsidiary, George A. Fuller Construction Company (GAFCO), would assume contract responsibility for Peace Hawk V construction, the Air Force (SA-ALC) would assume full

contract administration responsibility, and the authority which the COE had exercised over Peace Hawk III construction would be altered to that of evaluating construction progress and advising USAF contract administrators (16).

USAF engineers to be sent to Saudi Arabia to supervise construction were then hand-selected by Major General Barnes, AFLC/DE, and sent on temporary duty to GAFCO's design center in California for extended over-the-shoulder design reviews of Peace Hawk V technical facilities (16).

Additions to the Peace Hawk III extension. On 1 December 1975, the Peace Hawk III extension, which was to expire and be replaced by Peace Hawk V on 15 February 1976, was amended to provide for long lead time development work on the PRISM computerized tracking and reporting system which would be implemented under Peace Hawk V. A Northrop subsidiary, Northrop Worldwide Aircraft Services, Inc. (NWASI) was contracted to install one Saudi-leased computer in Dhahran, Saudi Arabia, and another at NWASI headquarters in Lawton, Oklahoma. NWASI was to establish and operate an integrated logistics system for the Saudis, and interface that system with the USAF/AFLC data system. NWASI also was to develop Planning Factor Files for Saudi-peculiar F-5 aircraft and track Saudi supply requisitions. The in-country computer was to be operational by 20 June 1976 (62).

Also in December 1975, the Peace Hawk V construction contract was pre-awarded to Northrop, to provide added lead time to its construction subsidiary, GAFCO (16). Northrop then made the decision to award subcontracts for Peace Hawk V construction projects prior to the completion of the facilities' design, in order to meet its schedule. GAFCO asked for bids based on very limited engineering definition. A Pakistani firm, Joint Venture, was awarded the contract for technical facilities construction for a price of approximately $166 million, which has since increased to more than $200 million as changes to the contract have been made. Saudi delay in approval of Joint Venture then caused Northrop a 45-day delay in beginning constructions (16).

Swiss contractors who had bid (unsuccessfully) for the construction contract later made "certain allegations with regard to the bidding procedures [60]" through diplomatic chanrels, but were unsuccessful in reversing the award decision. Their complaint reportedly centered around offset program promises for future favors made to them during Northrop sales of F-5 aircraft to their country (16).

Peace Hawk IV

Peace Hawk IV consisted of the sale of 40 F-5Es, 20 F-5Fs, two simulators, and various other aircraft improvements and support to the Saudi Arabian government (67; 68). This phase of Peace Hawk had its beginning in

October 1973 when the RSAF requested an FMS case for 50 F-5Es (37:2). Two months later, in December 1974, the Saudi Arabian government asked that the Department of Defense (DOD) conduct a survey of the Saudi Arabian Armed Forces to determine improvements that could be made in the next ten years to increase their capability to defend their country (54; 74:3). The survey was conducted by the DOD in April 1974. In August 1974, the Executive Summary of this survey was published by USAF/LGF; it formed the baseline for Peace Hawk IV (54). One of the recommendations of the USAF regarding force structure was for the RSAF to procure additional F-5 aircraft with an increased multi-role capability and to retrofit the F-5Es already possessed to the same configuration as the new aircraft (74:3). A Letter of Offer (LOA) for 40 F-5Es, 20 F-5Fs, and their support was requested by the Saudis in the summer of 1974, and the U.S. Government replied to this request with an LOA in October 1974 (54). This LOA was rejected by the Saudis, who requested that the USAF add simulators and other aircraft improvements to it (37:2). Price and Availability information to fulfill this request was gathered, and a revised LOA with an undefined improvements package was presented to the Saudis in December 1974 (54).

Prince Sultan Bin Abdul Aziz, the Saudi Arabian MCDA, signed the DD Form 1513, Offer and Acceptance, for Phase IV of Peace Hawk on January 4, 1975 for approximately

$769 million dollars (67; 68). Items called for in the LOA were as follows (49; 53):

1. Forty F-5Es and twenty F-5Fs with RSAF options plus ARC-164 radios and ARN-XXX TACANs. (The Saudis later chose the ARN-118 TACAN [74:3].)

2. Two Weapons Systems Simulators plus support.

3. Ten F-5 Reconnaissance (Recce) Nose Kits which would be interchangeable between the F-5E and F-5F.

4. Mobile Training Sets (MTS).

   a. One new F-5E/F MTS with RSAF options.

   b. One F-5F modification kit with RSAF options for the existing MTS purchased under Peace Hawk II.

5. Common/peculiar support equipment and initial spares for four main operating bases. (As of the completion date of this thesis, the Saudis have not yet designated a fourth main operating base. The RSAF is currently operating out of bases at Dhahran, Taif, and Khamis Mushayt [see Figure 7] [54].)

6. Contractor Technical Support.

7. Four Weapons Systems Logistics Officers.

8. C-5 delivery of the aircraft.

9. AFSC/AFLC travel.

10. Improvements Package.

Three of these items, the improvements package, the MTS, and the flight simulators, plus a fourth item, automatic test equipment, (which was later added to the improvements

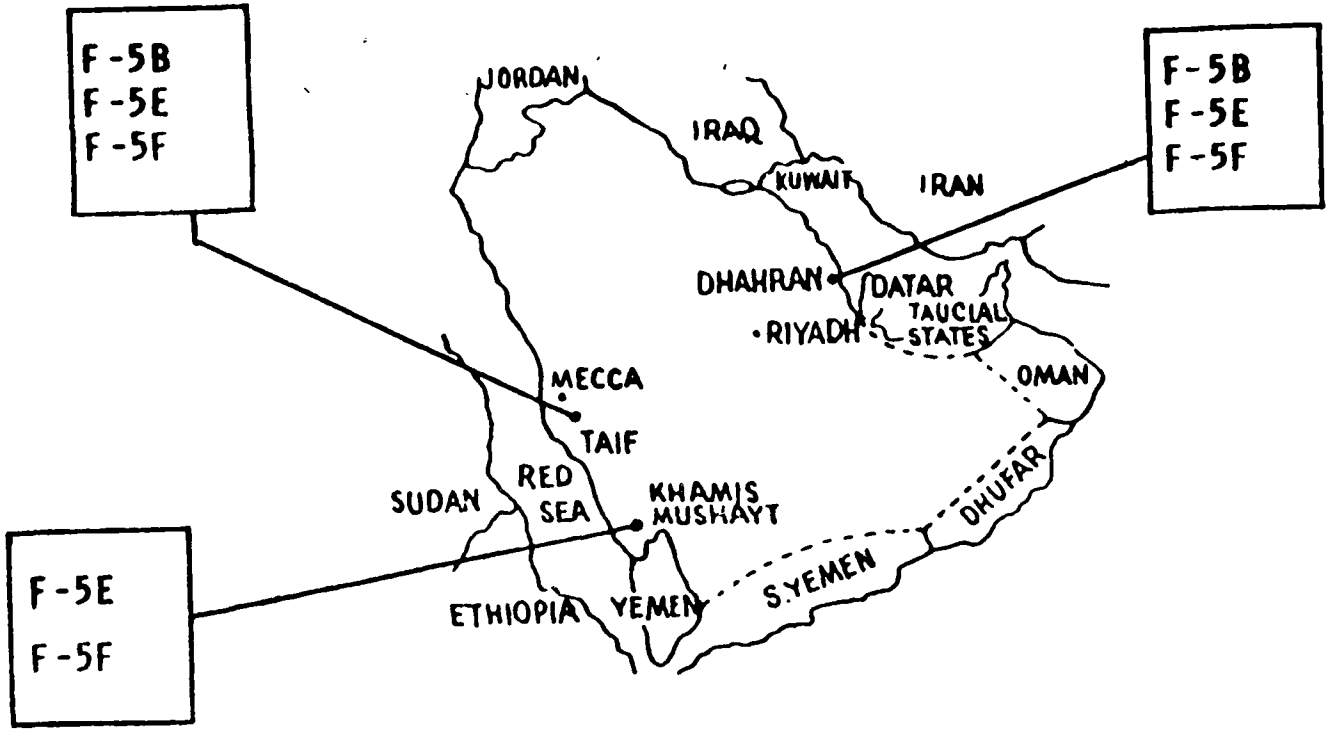

Figure 7

RSAF F-5 Bases (56:5)

package), played big roles in Peace Hawk IV. Further discussion of these items will show the scope, complexity, and some of the problems encountered in implementing Peace Hawk IV.

Improvements package. Contracts for the basic Peace Hawk IV aircraft were let to Northrop in February 1975. They called for an initial basic aircraft configuration (firm in LOA) which consisted of the following (37:3):

1. Inertial Navigation System (INS).
2. Instrument Landing System (ILS).
3. Assisted Takeoff Provisions.
4. Aerial Refueling System.
5. Reconnaissance Provisions.
6. Inboard 275 gallon fuel tank capability.
7. Centerline/inboard 150 gallon tank capability.
8. ARC-164 radio.
9. ARN-XXX Tactical Air Navigation System (TACAN) (Saudis later chose the ARN 118 TACAN [74:3].)

These items were in the basic Phase IV aircraft without the improvements package (except for the radio and TACAN) which had not yet been definitized. Other commitments had been made in meetings between officials from the USAF and RSAF to provide improvements such as Laser Guided Bombs, Maverick Missiles, and improved radar, but they had not been finalized (74:3).

In recognition of these commitments and RSAF desires, a long lead contract to define and provide for improvements was begun in February 1975 (54). This contract was designed to determine feasible improvements and provide a recommended USAF improvement program to the RSAF (74:3). Originally scheduled to last through June 1975, the contract was extended to August and finally through October 1975. Brigadier General Partin, Deputy for Systems, Aeronautical Systems Division, AFSC, briefed the Saudis in August 1975 on the improvements that the Secretary of Defense recommended they make (54). On October 28, 1975, the RSAF approved these recommendations. The improvements approved by the RSAF were as follows (77:2):

1. Improved Radar (APQ 159).
2. Automatic Test Equipment.
3. Maverick Capability.
4. Laser Target Designator for the F-5F.
5. Laser Guided Bomb Certification.
6. Improved Ejection Seats.
7. ALR 46 (V)-2 Radar Warning Receiver.
8. ALE 40 Chaff/Flare Dispenser System.
9. Environmental Control System.
10. ARN 118 TACAN.
11. ARC-164(v) UHF Radio.
12. General Reconfiguration. (This was undertaken to allow for weight, space, and EMI [electromagnetic

interference] considerations resulting from the above improvements. One of the items included in this reconfiguration was the APX 101 Identification--Friend or FOE [IFF] unit [74:2-3].)

Approval of the improvements package was granted almost nine months after contracts had been submitted to Northrop for aircraft production. As a result, the USAF and Northrop had been operating on an essentially undefined program during the interim period of time.

Developmental flight testing, utilizing USAF F-5Es, had been conducted since January 1975, without a defined improvements package. RSAF approval of the improvements package finally gave the definition needed to start placing the improvements in the aircraft. The nine month delay in arriving at a final decision had compressed the schedule. Production delivery of the first aircraft was scheduled for June 1976; however, USAF officials indicated to the RSAF that more of the improvements could be placed in the aircraft if the production delivery date was slipped to September 1976 (54). The RSAF approved this slippage, and production of the first two aircraft was completed in September. (Despite the Saudi approval for slipping the production delivery date, all the items were not installed in the Phase IV aircraft prior to their leaving production. The items not installed were designated Package Two Items and were to be installed in the aircraft after delivery

in-country. Package Two Items consisted of the Radar Warning Receiver, Blanking Electronics Unit, Chaff/Flare Dispenser, and Laser Target Designator [54].) These two aircraft (F-5Es) and the first two F-5Fs, which were delivered from production in December 1976 and January 1977, were utilized for production verification testing which was scheduled to continue through December 1977 (54; 75:2).

Support of these aircraft, once they were in-country, was affected by the lack of definition of the improvements package. AFLC was not able to go through normal acquisition channels in order to assure that support equipment, spares, and other necessary equipment was available when the aircraft arrived in Saudi Arabia. (Because this was a concurrent program, AFLC normally would not have ordered any support equipment, spares, etc. until the systems were checked out. This delay would have caused the support not to be available when needed. Some systems, such as the radar, still were being checked out at the time this thesis was completed.) AFLC worked closely with AFSC and Northrop to acquire NOA (Not Otherwise Assigned) kits for each one of the improvements. As designs for these improvements were changed, the kits were updated. Some kits, such as the one for the radar, were already in Saudi Arabia when design changes necessitated kit changes. The normal logistics functions

done by AFLC such as provisioning, source coding, etc. were to be accomplished after the fact, but AFLC's actions did help assure that the aircraft would have support available upon arrival in Saudi Arabia (54).

Another important part of the improvements package involved the retrofit of 18 F-5Bs and 29 F-5Es purchased by the RSAF under Phases I and II of Peace Hawk (54). (Two F-5Bs and one F-5E had been lost in aircraft accidents.) The original plan was to retrofit these aircraft in-country. In October 1975, HQ USAF tasked AFSC to perform a Retrofit Study in order to determine the feasibility of retrofitting the aircraft, the type of retrofit, and the best location for the retrofit to take place (56:4). A meeting was held in November 1975 involving personnel from HQ USAF, AFSC, AFLC, and TAC to evaluate retrofit options. Two options selected for further study were as follows (56:14):

1. Partial retrofit in-country consisting of improved TACAN, radio, and egress systems.

2. Full retrofit either in Palmdale, California, or in-country. These options were further analyzed and option one (Partial Retrofit) was not favored due to less aircraft capability and support problems (56:19). Option two (Full Retrofit) was studied and full retrofit at Palmdale was chosen as the most feasible option, based on costs (approximately $5.8 million more in-country), community

impact, housing problems, limited technical support, supplementary support equipment requirements, and maintenance interference (56:33). In March 1976, this option was briefed to the RSAF who accepted this approach (54).

Kitproofing, conducted to determine the changes needed to make the improvements package feasible for the retrofit of the Peace Hawk II aircraft, began in December 1976 and was scheduled to continue through December 1977 (54). Once the kitproofing was complete, it would serve as the baseline for retrofit of the remaining aircraft. The Peace Hawk I aircraft were to be retrofitted with new radios and TACANs in-country. Retrofit of both Peace Hawk I and II aircraft was scheduled to begin in July 1977 and to be completed by December 1978 (54).

Automatic test equipment. As part of the improvements package, the RSAF chose to use Automatic Test Equipment (ATE) for support of much of the new equipment that they had selected. ATE was developed for the radar, the IFF, the ILS, the Chaff/Flare Dispenser, the Maverick and Dogfight Interface Control Units, and the Blanking Electronics Unit (54). This equipment was designed to provide expanded intermediate level maintenance while substantially reducing life cycle cost by reducing spare requirements and depot repair costs (74:2). Initial RSAF reaction to proposals for the ATE was not favorable because the RSAF considered

the equipment too sophisticated, and thought it would require extensive training of RSAF personnel to operate (78). The RSAF were also concerned that, once trained to operate the ATE, their maintenance personnel would become "button pushers" and would not be required to have a basic understanding of the equipment they were working on (54). AFSC representatives held meetings with the Saudis concerning this subject and after several discussions the Saudis agreed that ATE should be included in the improvements package. Captain John Shedd from the International Fighter Systems Program Office (SPO) participated in these discussions and made the following comments about them:

> Besides cost, we hit on self-sufficiency and that ATE would facilitate the training of RSAF technicians. The point we got across was that they had to continue to come to ATE with technicians who are knowledgeable in the avionics area . . . . They would have to provide people who are Tech School qualified. Based on their basic knowledge and basic understanding in the avionics area, they would then be trained on ATE [54].

Mobile training sets (MTS). Peace Hawk IV called for the procurement of one new mobile training set (MTS 120) and the updating of an earlier mobile training set (MTS 113) purchased for the Peace Hawk II (F-5E) aircraft. (These MTS mock-ups of the aircraft are used for maintenance training and periodically for pilot training [54].) MTS 113 located at Taif Air Base, Saudi Arabia, required three kits to bring it up to date. The first kit, delivered in September 1976, contained the F-5E improvements;

the second kit, delivered in March 1977, contained the F-5F improvements, and the third kit, delivered in April 1977, contained the ALR-46 Radar Warning Receiver and Chaff/Flare Dispenser (54). MTS 120, delivered in April 1977 to Dhahran Air Base, Saudi Arabia, was fully modified except for the third kit which contained the ALR-46 and the Chaff/Flare Dispenser. This kit was delivered along with the MTS 120 (53).

Flight simulators. The RSAF requested the inclusion of two F-5E simulators, support equipment, and spare parts in the Peace Hawk IV LOA signed in January 1975. Provisions for facilities to house the simulators at Dhahran and Taif Air Bases were included in the Peace Hawk V LOA (20:1-1). Since this involved the development, acquisition, and installation of simulators that were not yet in the USAF inventory, AFSC was given management responsibility. A briefing was provided by the Simulator SPO of AFSC to the RSAF and the USMTM in February 1975 which defined the hardware and logistics support concept. The minutes of this briefing were coordinated to provide a baseline for development of the simulator system (20:1-1). Baseline requirements consisted of a cockpit/motion system, instructor station, computational system, and a facility to house the equipment (73:2). Provisions were also provided for

future growth such as a Ground Control Intercept (GCI) tie-in, a visual system, and other potential aircraft changes (73:2).

A competitive contractor selection process began in December 1975 and resulted in the award of a contract to the Link Division of the Singer Company, Silver Springs, Maryland, in October 1976 (20:1-1). The contract called for two F-5E Instrument Flight Simulators to be designed, fabricated, tested, and installed. In addition, Singer-Link was required to operate and maintain the simulators for one year, beginning at the "Ready For Training" (RFT) date, and also was responsible for providing initial spares and all associated support equipment (29). The RFT dates were December 1978 and January 1979 (22). Support for two additional years of Operations and Maintenance (O & M) was available if the RSAF desired it. However, at a Simulator Review Briefing held in Saudi Arabia in March 1977, the RSAF stated that it would purchase one additional year of O & M support, but would not be rushed into taking the full two years as previously offered. The RSAF indicated that it wanted to ensure its satisfaction with the services performed by Singer-Link before signing a long term contract (22). Singer-Link personnel attending the briefing said they would be willing to accept the one year option.

Earlier, at the Simulator Preliminary Design Review, which took place at Silver Springs, Maryland, from

25 January 1977 through 4 February 1977, the RSAF had stated that it wished to align the support concept of the simulators with the concept already utilized to support the RSAF F-5E aircraft (29). The existing simulator contract required Singer-Link to provide all O & M, all support equipment, and all spares. Under the concept desired by the RSAF, Singer-Link still would be responsible for O & M, but the RSAF/USAF would become responsible for support equipment and spares support (22). AFLC, in supporting this desire, would provide a total package of support equipment and initial spares. This package would be ready no later than November 1978, one month prior to the RFT date (22). Future spares and support equipment would be handled through applicable follow-on FMS cases. (At the time research for this thesis was discontinued, preparations for simulator support by AFLC were underway. HQ USAF renamed the Simulator Program "Peace Wren" in March 1977 [24]. Ogden Air Logistics Center had been identified as the System Manager. Provisioning conferences for support equipment and spares for the simulators were scheduled to take place sometime between September 1977 and November 1977. Once the requirements are determined, they will be forwarded to the RSAF for requirements definitization. Accomplishment of this action by the RSAF will allow AFLC to proceed in assuring that the simulator support package is ready in time [22; 24].)

Peace Hawk V

Peace Hawk V finalization. The Peace Hawk V LOA was finalized on 31 January 1976, and was signed by the Saudi MCDA, Sultan Bin Abdul Aziz, on 22 February 1976, for contractor services not-to-exceed $1,543,161,000 and USAF administrative charges of $30,863,220 (69). The contract period extends from 15 February 1976 until 15 June 1979.

Peace Hawk V support categorization. Contractor services were divided into separate cases for management purposes, including the following (62):

Case	Item Identifier	Services Value
SR-GAN	Contractor Operational Support	$897,204,000
SR-GAT	Technical Construction	498,637,000
SR-GAR	Material Support	31,500,000
SR-GAS	U.S. Government Technical Services	31,210,000
SR-GAN	Custodial Services	6,434,000
SR-GAX	Training Mods	31,000

For the purpose of description, Peace Hawk V is best subdivided into the following areas: the maintenance program, the logistics and logistics training program, operational support services, personnel support services, technical facilities construction, and housing construction (43).

Maintenance program. The purpose of the maintenance program is to provide aircraft, engine, support equipment, special vehicle, avionics, precision measurement equipment, armament systems, weapons, and other related maintenance services required to support RSAF F-5 systems, and daily flying and training schedules (based on an aircraft utilization rate of 20 hours per month, a minimum operationally ready (OR) rate of 71 percent, and a not operationally ready due to maintenance (NORM) rate of no more than 24 percent) (43). The primary goal of the maintenance program, however, is the concurrent training, toward self-sufficiency, of RSAF maintenance officers and technicians. As rapidly as RSAF trainees reach a level of proficiency required to assume the full authority and responsibility of their assigned positions, they are integrated into the work force and their contractor counterparts are moved to another position (43).

There are three separate training objectives for Saudi trainees. The first is English language comprehension; the second is technical comprehension of aircraft operations, maintenance, and support; the third is actual performance of aircraft operations, maintenance, and support. Each trainee must achieve a level of English proficiency before his technical training courses begin. As he progresses in technical ability, he is cycled through progressively more difficult English language courses.

Both English language training and technical training courses are conducted at Dhahran and Taif Air Bases. After accomplishing a specified level of proficiency in the English language and in technical training, the trainee is given extensive on-the-job training (OJT) at either Dhahran, Taif, or Khamis Mushayt Air Bases (35).

Logistics program. Under the logistics program, the contractor is to establish base supply activities at Dhahran and Khamis Mushayt Air Bases, operate an existing base supply activity at Taif Air Base, and operate a depot supply activity at Dhahran Air Base. The contractor is to conduct technical training and OJT of RSAF supply personnel concurrent with the accomplishment of supply and logistic functions. Another of the contractor's responsibilities is to provide logistics support data to RSAF and Det 22 upon request. These supply and data systems are to be oriented toward support for RSAF F-5 aircraft and associated systems and accessories (43).

A non-standard support program, currently being developed by AFLC using Peace Hawk V SR-GAN case funds, is being incorporated into the Phase V contract to provide logistic support for all systems on RSAF F-5B/E/F aircraft designated as being country-peculiar (24). Under this program, standard Air Force management systems will be used to insure performance of the full range of follow-on logistics

functions which will be primarily accomplished by contract. The range of this program's logistics support functions will include: cataloging, requisitioning and distributing parts, supplying technical publications, performing material deficiency reporting, engineering, and provisioning. Reparable depot level items will be shipped to the contractor through an RSAF freight forwarder for repair and overhaul. Serviceable stocks will be warehoused in-country. Stock replenishment requisitions will be submitted using assigned federal stock numbers (upon completion of cataloging) to AFLC for input into the HC-51 system against the appropriate RSAF FMS case. The requirement will then be routed to the appropriate contractor for procurement action. Direct shipment from the supplier to Saudi Arabia will be effected through a Saudi-contracted freight forwarder (43). The services of this program may later be extended by AFLC to other countries, such as Iran and Switzerland (19).

Operational support services. Peace Hawk V operational support services included the provisioning of vehicles, the operation of photo-reconnaissance laboratories, the maintenance of air crew life support equipment, the maintenance and operation of ground communication systems, the operation and maintenance of bombing and gunnery ranges, and the performance of many administrative tasks (43).

Contractor personnel support. Contractor personnel support services included housing, messing, motor pool, medical, recreational, and other services for contractor, subcontractor, and SA-ALC Det 22 personnel and their dependents at Dhahran, Taif, and Khamis Mushayt Air Bases, and at Riyadh, Saudi Arabia. Funding which was originally provided for leased housing was applied to housing construction due to the lack of lease housing available and its high cost (43).

Technical facilities construction. The Peace Hawk V technical facilities construction program provided for the construction of 32 facilities at Dhahran, Taif, and Khamis Mushayt Air Bases, identified as necessary to support 75 fighter type aircraft at each base. GAFCO, which was responsible for construction management of these facilities, subcontracted the construction to a Pakistani construction consortium, Joint Venture. Design drawings, furnishings, and equipment lists were to be approved by the USAF, which retained responsibility for obtaining RSAF agreement on selection of these items (43).

Housing construction. The Peace Hawk V housing construction program was to provide a total of 1,267 houses and associated community facilities at the three air bases. These houses consisted of a mix of 510 pre-engineered houses and 757 houses of standard block and

concrete construction (43). Though no housing construction funds, as such, were included in Peace Hawk V provisions, funds for leasing housing for Northrop employees were provided. When Northrop discovered that housing could be constructed less expensively than it could be leased (the few houses found to be available leased for $100,000 to $200,000 per year, paid in advance under a minimum lease period of two years), the decision was made and approved to use employee housing funds to construct housing. These three and four bedroom houses, designed to accommodate the Saudi lifestyle, were planned for eventual turnover to the Saudi government for use as base housing (16).

Changes to Peace Hawk V. On 9 February 1976, prior to signing the Peace Hawk V LOA, the Saudis indicated a desire for four additional construction projects. One of these projects was the construction of a power plant and distribution center at Taif to satisfy power requirements for a civilian-contracted housing area which the Saudis had not previously mentioned to USAF or Northrop representatives. The other projects were a sewage plant at Dhahran, relocation of a print shop, and installation of a water pump and pipeline at Khamis Mushayt (12). The power plant addition at Taif was provided by shifting a power plant designed and funded for Khamis Mushayt to Taif, after it was discovered that the Saudis had independently contracted for a

civilian contractor to build a power plant at Khamis Mushayt (16). After inclusion of the water pump and pipeline into Peace Hawk V, it was discovered that the CCE had been contracted to provide wells and water distribution systems which tapped the same underground water resources (10). By joint agreement, the USAF then transferred some of its Peace Hawk funds to the CCE to allow them to integrate the needs of both projects into one (16).

During the Peace Hawk V negotiations in January and February of 1976, the Saudi government indicated some apprehension about the in-country portion of the programmed integrated logistics system (PRISM). Their primary concerns involve safeguarding of sensitive information, and potential interfacing problems between this computerized system and another system visualized in Saudi long-range plans. Though the Saudi government signed the Peace Hawk V contract, which included the in-country automation program, it hedged verbally on installation of the in-country computer and on how much tracking and reporting was desirable. In the meantime, the USAF needed the approved Peace Hawk V computer assistance for managing FMS cases for Saudi Arabia, and leased and installed the U.S. based portion of the system. The Saudi-based computer was leased without some of its accessory equipment, installed, and put to use by Northrop for managing its own in-country efforts (30).

AFLC, in June 1976, received a message from the USAF representatives in-country stating that the Saudis unequivocally did not want the in-country portion of PRISM placed in operation (1). NWASI had continued at a restricted level of effort pending this direction. After receiving this direction, NWASI channelled its computerization efforts via the U.S.-based computer toward simulation of in-country computer supply requisitions, and allocated more manpower resources to manual accomplishment of its in-country mission. (Funds to pay for these additional personnel came from the funds that had been designated for computer accessory equipment which was not purchased [30].) The modified PRISM computer system which evolved was redesignated Reporting Analysis Planning System (RAPS).

AFLC/MI then initiated action to develop a revised work specification for the work to be done by NWASI, so that a 12-month letter contract between the USAF and Northrop could be effected for NWASI's services. During this 12-month period, a statement of work (SOW) was to be developed which would be in sufficient detail to allow award of a follow-on competitive contract (30).

By August 1976 it was evident that some opposition to NWASI's function existed within AFLC. One intra-directorate memo, dated 10 Aug 1976, called for a "more thorough review of its [the NWASI-USAF contract] worth and

its legal implication [51]." The memo pointed out that a major part of the contractor's efforts would be "taking data from USAF data systems and then giving that data back to the USAF" at a proposed cost of $6.9 million. It also noted that the contractor would have complete access to "data on prices, component item breakdowns, usage, applications, failures, etc. . . . at no charge . . . which could easily give the contractor a competitive advantage . . . [51]."

A later memo released within the same directorate requested that all branches ". . . allow full interchange of RSAF foreign military sales data with the contractor [NWASI] . . . [61]." The NWASI Dayton Office Field Manager stated in an interview, however, that he had experienced difficulty in meeting milestones in those areas in which he was required to extract data from AFLC systems. He had incurred time delays caused by difficulty in gaining acceptance by JC-41 Acquisition Procurement Management System personnel, who were sensitive about a contractor probing in their data records (30).

On 3 December 1976, a fixed price letter contract (1) for continued RAPS computer services was negotiated by the USAF directly with NWASI (rather than through Northrop) and was backdated to 25 June 1976 for funding purposes (30). Definitization of the SOW was completed in April 1977.

Peace Hawk V progress. By February 1977, construction of 45 of the 82 technical facilities required by Peace Hawk V were in progress, and the remaining 37 facilities were to be started incrementally through early 1978. The contractor was behind schedule at each base. Primary difficulties encountered were problems obtaining Saudi visas for third country national workers, Saudi program changes, difficulty in obtaining Saudi excavation permits and approval of construction plans, difficulty in obtaining Saudi permits and security passes for construction workers, poor in-country communication facilities (43), and congested port facilities (58).

Also by February 1977, Peace Hawk V training programs were behind schedule. Of the minimum 25 Saudi trainee inputs required monthly to achieve 1,646 trained technicians by June 1979 (Peace Hawk V expiration), an average of only seven per month had continued the program. The attrition rate of those who entered training since the beginning of Peace Hawk V training efforts was 23.4 percent (43).

Peace Hawk VI

Peace Hawk VI provided for the procurement of four F-5F aircraft and their delivery to Saudi Arabia. Negotiations began in March 1976 when Saudi officials indicated that they wished to purchase additional aircraft (54).

The F-5 SPO located at Wright-Patterson Air Force Base, Ohio, assembled Price and Availability (P&A) information necessary for preparation of the LOA and submitted it late in the summer of 1976.

The LOA was presented to the RSAF with the expectation that it would be approved no later than 1 November 1976 (70). This, however, did not happen. Price differences between the Peace Hawk IV and VI LOAs for the F-5F aircraft were not understood by the RSAF, and the RSAF would not sign the LOA until the differences were fully explained (7). An explanation was given to the RSAF citing the fact that the Peace Hawk IV aircraft were costed without the improvements package, and Peace Hawk VI aircraft were costed with the improvements. Two years of price escalation also had affected costs (54). This explanation was acceptable to the RSAF, but not before the LOA had expired. A modification to the LOA which extended the expiration date to 31 January 1977 was issued. On 30 January 1977, the Saudi Arabian MODA signed the LOA (70).

Peace Hawk VI called for the procurement of four F-5F aircraft and their delivery. AFSC was given the management responsibility of procurring the aircraft, while AFLC was tasked with arranging for the delivery of the aircraft to Saudi Arabia (6). The aircraft were scheduled to be delivered from production during the first and second

quarters of calendar year 1978 with delivery in-country by C-5 aircraft scheduled for the second quarter of 1978. No additional spares or support equipment were included in this phase because resources available within follow-on Supply Support Arrangements and Peace Hawk IV initial lay-in were considered adequate (6; 70).

Summary

Peace Hawk Phases III Extension, IV, V, and VI resulted from a continued desire by the Saudi Arabian government to further modernize and increase the capability of the RSAF. These phases included the acquisition of additional aircraft, the retrofitting of aircraft purchased under Peace Hawk I and II, and greatly increased logistics support for these aircraft systems. This logistics support included contractor maintenance of the aircraft, contractor supply services, concurrent training by the contractor of RSAF maintenance and supply personnel, extensive construction of technical facilities and housing, continuation of English language training, and various operational and personnel support services. All of these phases (with the exception of the Phase III Extension) are still in progress. Their successful completion will depend on continued management emphasis to assure that their unique requirements are met in a timely and satisfactory manner.

CHAPTER VI

PEACE HAWK PROBLEM AREAS

The purpose of this chapter is to discuss several of the problem areas of Peace Hawk. Discussion of these problem areas is not meant as a criticism of the program, but is designed to give the reader added insight into the magnitude and complexity of Peace Hawk. Areas to be discussed include support of country-peculiar items, program changes and additions, Saudi decision making, and RSAF training progress.

Support of Country-Peculiar Items

Logistics support of country-peculiar items (non-standard) has been a subject of controversy since the early stages of Peace Hawk. As mentioned in Chapter III, the F-5 aircraft was not originally developed for inclusion in the U.S. Air Force inventory. In addition, items on the aircraft such as the Inertial Navigation System, the Instrument Landing System, the In-Flight Refueling System, and many of the items in the Peace Hawk IV improvements package are not common to the USAF F-5 aircraft.

Under USAF policy, AFLC is not authorized to provide logistics support for components peculiar to FMS customers (71:2-3). Although this policy existed, the

RSAF requested that the USAF provide support for country-peculiar items, and the USAF agreed to the RSAF request. HQ USAF/LGF authorized deviation from the policy, and San Antonio Air Logistics Center (SA-ALC) awarded a letter contract to Northrop for country-peculiar item support. Under the contract, Northrop provided country-peculiar equipment, technical and engineering support, maintained technical orders and data for the peculiar systems, and responded to technical problems (25:42). This support by Northrop was originally to continue through Phase III of Peace Hawk, but has been continued through successive Peace Hawk phases.

The improvements package for Peace Hawk IV, in addition to being affected by lack of definition, contained country-peculiar items. AFLC was not able to go through normal acquisition channels in order to assure that support equipment, spares, and other necessary equipment was available when the Peace Hawk IV aircraft arrived in-country. Working closely with AFSC and Northrop, AFLC acquired NCA (Not Otherwise Assigned) kits for each one of the improvements. Most of these kits were bought by AFLC on the recommendation of Northrop without going through the normal logistics functions such as provisioning, source coding, etc. (54). The normal logistics functions were to be accomplished by AFLC after the kits were assembled. However, because many of the items in the improvements package

were country-peculiar, AFLC has not yet completed provisioning, source coding, etc. for them. These logistics functions must be done because the basic F-5 aircraft is scheduled to transition from AFSC to AFLC in June 1977, and the Saudi-peculiar F-5 will be transitioned in October 1978 (54). At that time, AFLC will assume management and engineering responsibility and must be able to provide spares, follow-on support, etc. even though many of the items on the aircraft are country-peculiar.

To help overcome this problem, AFLC is currently developing a non-standard support program which is being incorporated into Peace Hawk V. This non-standard support program is designed to provide logistics support for all systems on the RSAF F-5B/E/F aircraft designated as being country-peculiar (24). Under this program, standard Air Force management systems will be used to insure performance of the full range of follow-on logistics functions which will be primarily accomplished by the contractor (Northrop). The range of this program's logistic support functions will include: cataloging, requisitioning and distributing parts, supplying technical publications, performing material deficiency reporting, engineering, and provisioning. Reparable depot level items will be shipped to the contractor through an RSAF freight forwarder for repair and overhaul. Serviceable stocks will be warehoused in-country. Stock replenishment requisitions will be submitted

using assigned federal stock numbers (upon completion of cataloging) to AFLC for input into the HO-51 system against the appropriate RSAF FMS case. The requirement will then be routed to the appropriate contractor for procurement action. Direct shipment from the supplier to the RSAF will be effected through a Saudi-contracted freight forwarder (43).

This non-standard support program should enable AFLC to support RSAF country-peculiar (non-standard) items. It can serve also as a basis for the support of country-peculiar items in future FMS cases for other countries.

Program Changes and Additions

Some problems have occurred as a result of program changes and additions by the RSAF. Fortunately, AFSC, AFLC, and Northrop have been able to work well together, and thus help alleviate the effect of these changes and additions on Peace Hawk.

Peace Hawk II. The LOA for Peace Hawk II, which primarily involved the sale of 30 F-5Es to the RSAF, was signed on 29 September 1971 (DDF 1513). In June 1972, the RSAF requested an aircraft configuration change involving installation of an Inertial Navigation System (INS). This request came nine months after the original LOA had been signed, and after aircraft production was in progress. A second change involving inclusion of an in-flight refueling

capability was requested in October 1972 (13 months after the original LOA). A third change was requested in February 1973 for installation of a sophisticated Instrument Landing System (17 months after the original LOA). Since these changes had occurred after aircraft production had begun, retrofit of some aircraft was necessary. Production line modifications also had to be made. In addition, the INS and in-flight refueling capability had to be flight tested by the USAF (25:16-17).

The first Peace Hawk II F-5E aircraft was scheduled for delivery in December 1973, but as a result of the changes, the first aircraft was not delivered in-country until February 1974. Despite these changes, through superior management by AFSC, AFLC, and Northrop, the delivery of the F-5Es for Peace Hawk II was completed on schedule in late 1974 (54).

Peace Hawk V. The Saudi government has continually added facility construction projects to the Peace Hawk V program. After the LOA for Peace Hawk V was prepared for Saudi approval, the Saudis indicated a desire for four additional constructions, including a power plant, a sewage plant, a print shop, and a water system (12). In early 1977 the RSAF requested the construction of 45 additional pre-engineered houses, two warehouses, and a vehicle maintenance building to be built at Khamis Mushayt. Such

additions have been characteristic of the constant changes which Peace Hawk V has undergone, and have impacted the Peace Hawk construction schedule by compounding existing manpower shortages. Currently, 43 of 52 construction projects are behind schedule, and 27 of those are more than five percent behind schedule (58).

Saudi Decision-making

Numerous delays in the Peace Hawk program have resulted from Saudi government decision-making. The extension of Peace Hawk III was due primarily to indecision by the Saudi government over the provisions Peace Hawk V should include. It took the Saudi government from September 1974 until June 1976 to decide that it did not want the in-country portion of the PRISM computer system. As late as 22 February 1976, the Saudi government committed itself to spend millions of dollars on leasing PRISM computers and assorted peripheral equipment, the use of which it disapproved four months later (1).

Problems in Peace Hawk IV were due mainly to the length of time necessary to get a final decision by the RSAF on the aircraft improvements package. An undefined improvements package was contained in the original LCA. In February 1975, a long lead contract was begun to determine feasible improvements and provide a recommended USAF improvement program to the RSAF by June 1975. Two

extensions to the contract were necessary before the RSAF approved the improvements package in October 1975.

Approval of the improvements package was nine months after the contracts for F-5E/F production had been submitted to Northrop. The nine month delay in arriving at a final decision compressed the time schedule for Peace Hawk IV, and USAF officials indicated to the RSAF that more of the improvements could be placed in the aircraft if the production delivery date was slipped to September 1976 (54). Despite the RSAF approval for slipping the production delivery date, all the improvement items were not installed in the Phase IV aircraft prior to their leaving production. Items not installed while in production were to be installed after the aircraft were delivered in-country (54).

Saudi delay in approval of the Pakistani construction firm, Joint Venture, caused a 45-day construction lag for Peace Hawk V technical facilities. By February 1977 the construction of technical facilities at all three Saudi air bases was running behind schedule due to Saudi governmental delays in approving visas for construction workers, delays in approving permits and security passes for construction workers, delays in choosing housing sites, delays in approving excavation permits, and delays in approving construction plans.

Though many of these delays are the result of bureaucratic decision-making procedures which are deeply

rooted in the Saudi culture, and others result from a lack of managerial expertise in technical matters, many of the delays can also be viewed as the result of concerns over the high percentage of foreigners in Saudi Arabia, concerns over controlling the country's high inflation rate (an approximate 50 percent increase last year), and Saudi concerns over other matters which may not be readily apparent to those who would criticize their Peace Hawk performance in isolation. Saudi decision-making with regard to the Peace Hawk program reportedly has shown signs of improvement (26), as the Saudi government has realized the impact of its delays on the program, and as younger, technically-oriented RSAF personnel have become increasingly more involved in decision-making.

RSAF Training Progress

From the beginning of Peace Hawk III in May 1972 until November 1976, the Saudi government was able to enlist only 830 Saudi personnel into the Peace Hawk training program. Of this number, 195 personnel withdrew from training for either administrative or deficiency reasons. During 1975 and 1976, an average of 12 RSAF personnel entered training each month, but fewer than 7 training inputs per month continued training. A minimum of 25 training inputs per month are required to meet the Peace Hawk V goal of 1,646 technicians by June 1979. By the end

of December 1976, a total of 635 RSAF technicians were enlisted in Peace Hawk training. Besides recruiting and attrition problems, the training program also has had significant problems with absenteeism and military transfers (43).

The foregoing training situation is a result of a very small Saudi Arabian work force (a little over one million persons), a lack of education and technical skills among the Saudi people, and competition within Saudi Arabia's rapidly expanding industrial sector for its gradually increasing labor force. It is easy for qualified Saudis to find jobs which pay more money and require less work than does the RSAF. The Saudi government, however, has recently increased RSAF salaries significantly to alleviate this problem (26).

Summary

Considering the magnitude of Peace Hawk, and the extremely rapid modernization of an undeveloped nation of only five and a half million people, Peace Hawk problems have been relatively minor. The Saudi government has asked for management support from the U.S. Government which has been extended to few other countries. The Saudis have requested numerous program changes and additions, and they have made decisions in their own characteristic manner. RSAF personnel inputs to the training program have been

fewer and slower than expected by western standards. But, it must be remembered that the Saudis have asked for nothing they were not willing to pay for, and it is because they are aware of many of their deficiencies that they have continued to request U.S. assistance.

CHAPTER VII

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The purpose of this thesis was to present an F-5 case study highlighting the unique factors, management, and environment of Peace Hawk Phases I through VI. The development of Peace Hawk's management structure is related as it evolved, (Chapters III and V), and is stated (Chapter IV) in the context of its functions and interrelationships. The effectiveness of this management structure toward achieving Peace Hawk objectives is evidenced by its flexible responses to non-standard support requirements, to Saudi desires for intensive USAF management at Saudi expense, to extensive Saudi program changes, and to numerous other contingencies which have evolved during the course of the Peace Hawk program. Though the RSAF has not completed logistics self-sufficiency with respect to its F-5 aircraft at the termination of this thesis effort, it has been able to progress as rapidly as its manpower, technological, cultural, educational, and governmental constraints have allowed.

To accomplish the thesis objectives which are contained in Chapter I, the researchers formulated and

answered four research questions which are listed and discussed in the following section.

Research Questions

Question one. What is the historical background of Peace Hawk? Saudi Arabia's armed forces historically have received much assistance and training from other foreign countries. Since World War II, the United States has been the leading supplier of material and training to Saudi Arabia. The organization and tactical doctrine of the Saudi Arabian armed forces have been patterned after those of the United States, and Saudi Arabian military planners have been strongly influenced by U.S. assistance and training. The dependence of Saudi Arabia on the United States for military assistance, and the strong influence of the United States military structure, have played a big part in the evolution of Peace Hawk.

Peace Hawk began when the Saudi Arabian government decided to modernize the RSAF by purchasing new fighter aircraft. At the time this decision was made, the RSAF had five flying programs involving seven types of aircraft. Most of the maintenance on these aircraft was provided by contract.

Several fighter aircraft were available on the international arms market which would have fulfilled the Saudi desires. One of these aircraft was the Northrop F-5

designed specifically for Security Assistance Programs to meet the demands of countries such as Saudi Arabia.

Northrop was given permission by the Department of State to demonstrate the capabilities of the F-5 to the Saudi Arabian government. However, permission by the State Department for Northrop to demonstrate the F-5 did not carry with it the right to enter into a sales agreement. Saudi Arabia, therefore, had to go through normal FMS channels in order to purchase the F-5. A Letter of Offer (LOA) was submitted to the Saudi Arabian government for approval, and on 28 July 1971, Prince Sultan Bin Abdul Aziz, the Saudi Minister of Defense and Aviation, signed the LOA for Peace Hawk I. This LOA called for the delivery of 20 F-5Bs, and signified the actual beginning of Peace Hawk. Since that time, Peace Hawk has grown to include six phases. Peace Hawk Phases I, II, IV, and VI have dealt primarily with aircraft sales while Peace Hawk Phases III and IV have dealt primarily with maintenance, training, and construction in support of these aircraft. Chapters II, III, IV, and V address the background of Peace Hawk from its early beginnings to its current day status.

Question two. How has the Saudi Arabian environment impacted upon the success of Peace Hawk objectives? A number of Saudi Arabian environmental factors including formal education, an inhospitable terrain, a lack of

natural resources, an almost nonexistent industrial base, and a lagging infrastructure have impeded Peace Hawk progress.

The primary objectives of Peace Hawk Phases I, II, IV, and VI have been to modernize the Royal Saudi Air Force, and to increase its defense capability. Though these objectives have not been reached to the full satisfaction of the RSAF and the Saudi government, as evidenced by continued weapons buys, there can be little question that progress toward modernization of weaponry has been achieved. Saudi Arabia's defense capability, however, is dependent upon more factors than the possession of modern aircraft systems. As long as the logistics support of those systems is dependent upon foreign contractors who are restricted by their own government from participating in hostilities, and as long as the industrial base of the country is dependent upon foreigners for its continuance, Saudi Arabia cannot be judged to have achieved a strong defense capability. Saudi Arabia has, however, made strides toward self-sufficiency in operation of its F-5 aircraft as indicated by the completion of contractor pilot training with the termination of Peace Hawk III.

The primary objective of Peace Hawk Phases III and V has been for the RSAF to achieve maximum self-sufficiency in supporting its F-5 aircraft. This objective has not been achieved, though progress has been made. Follow-on

Peace Hawk phases may be required to allow the RSAF to achieve self-sufficiency in the logistics support and maintenance of its modernized Air Force. And there is no reason, on the whole, to fault either the contractor's efforts or the Saudi government for failure to attain self-sufficiency to date. Both the contractor and the Saudi government have labored under constraints. The contractor has been faced with a shortage of construction workers, a shortage of Saudi trainee inputs, congested seaports, and continual program additions. The Saudi government, probably more aware of its problems than anyone else, has attempted to industrialize and modernize its country overnight, a feat accomplished by the western world in several hundred years. The Saudi government has been confronted with recent inflation rates of more than 50 percent annually, a total labor force of slightly more than one million workers, a culture which has little concern for hurry, a massive influx of foreign nationals, a lack of natural resources (with the exception of oil), a largely nomadic and uneducated people, and a lagging infrastructure. Peace Hawk timetables are the product of western planning on Saudi behalf, and any attempt to judge Saudi progress must also examine the validity of the timetable.

Saudi trainee inputs to training programs have been fewer than planned for; almost 25 percent of those who have entered training have dropped out; and Northrop is behind

in its construction schedule. But these facts are not as important to the Saudi government as the facts that there are more trained RSAF personnel today than before Peace Hawk, that over 75 percent of those who have entered training have continued it, and that modern air base facilities, roads, and houses exist today where only sand lay a few years ago.

Question three. What management roles have HQ USAF, AFSC, AFLC, and Northrop Corporation had in Peace Hawk? RSAF progress toward modernization and maximum logistics self-sufficiency can be attributed to the joint efforts of many DOD and contractor organizations. HQ USAF has retained overall authority for direction of the Peace Hawk program within its Directorate of Military Assistance and Sales. This office has ensured the legality and appropriateness of Peace Hawk negotiations with respect to higher level policies and directives, has provided guidelines to lower echelons for Peace Hawk implementation, and has served to coordinate and communicate Peace Hawk activities with agencies outside the USAF.

HQ USAF has delegated responsibility for the accomplishment of Peace Hawk programs to major commands such as AFSC, AFLC, TAC, ATC, and MAC, on a functional basis. AFSC, which has been assigned primary responsibility for Peace Hawk phases involving the sale and modification of

aircraft weapons systems, has implemented Peace Hawk Phases I, II, IV, and VI, primarily through ASD and its International Fighter Aircraft SPO. (As of the termination of this thesis effort, Phases IV and VI have not been completed.) AFLC, which has been assigned primary responsibility for Peace Hawk phases involving logistics support, has implemented Peace Hawk III and V, chiefly through the San Antonio Air Logistics Center (SA-ALC), but with administrative assistance from AFALD. TAC has provided F-5 pilot qualification for Northrop and RSAF personnel. ATC has provided training materials and training assistance. And, MAC has provided airlift of Peace Hawk materials and F-5 aircraft.

The Northrop Corporation, functioning as the Peace Hawk sole source contractor, has been responsible to the SA-ALC Commander for satisfactory completion of all contract work. In this capacity, Northrop has managed subcontracts with the George A. Fuller Company, Page Communication Engineers, Inc., Northrop Worldwide Aircraft Services (all Northrop subsidiaries), the Tumpane Company, and others.

Question four. What have been some of the problems encountered in Peace Hawk and what lessons have been learned which may be applicable to similar FMS programs in the future? Chapter VI highlighted some Peace Hawk problem

areas. Problem areas addressed included the support of country-peculiar (non-standard) items, program changes and additions, Saudi decision making, and RSAF training progress.

Country-peculiar items. Support of country-peculiar items has been necessary almost from Peace Hawk's inception. Under USAF policy, AFLC normally is not authorized to provide logistics support for components peculiar to FMS customers. The USAF, consenting to RSAF wishes, has provided for support of these country-peculiar items through a contract with Northrop. At first, this support was to have lasted through Peace Hawk III, but it has continued through later Peace Hawk phases.

The basic F-5E aircraft is scheduled to transition from AFSC to AFLC in June 1977, and the Saudi-peculiar F-5 will transition in October 1978. At that time, AFLC will assume management and engineering responsibility and must be able to provide spares, follow-on support, etc. although many of the items on the aircraft are country-peculiar.

AFLC is currently developing a non-standard support program to provide support for country-peculiar items. The non-standard support program is being incorporated into Peace Hawk V and is designed to provide logistics support for all systems on the RSAF F-5B/E/F aircraft designated as being country-peculiar.

Country-peculiar (non-standard) items appear to be a continuing factor in future FMS programs. If this non-standard support program works, it can serve as a basis for the support of country-peculiar items in future FMS cases, not only for Saudi Arabia but for other countries as well.

Program changes and additions. Program changes and additions necessitated retrofit of several aircraft, production line changes, and changes of some aircraft deliveries to Saudi Arabia under Peace Hawk II. Peace Hawk V has also been affected by program changes and additions. Construction additions coupled with a shortage of manpower have resulted in 43 of 52 construction projects being behind schedule at the time this thesis effort was completed.

Saudi decision-making. Saudi decision-making has caused numerous delays in the Peace Hawk program. The Peace Hawk III extension was due primarily to indecision by the Saudi government over what should be included in Peace Hawk V. Certain items in the Peace Hawk IV improvements package have had to be installed in the Peace Hawk IV aircraft in Saudi Arabia rather than at the Northrop factory as a result of Saudi indecision in approving the Peace Hawk IV improvements package. Construction of many of the Peace Hawk V technical facilities is running behind

schedule because of Saudi delays in approving visas, work permits, security passes, and choosing housing sites.

Although Saudi decision-making delays continue to hinder Peace Hawk progress, the Saudi Arabian government has begun to realize the impact of these delays. Younger and more technically-oriented personnel have become more involved in decision-making. If this trend continues, Peace Hawk delays due to decision-making should decrease and overall program progress should increase.

RSAF training progress. RSAF training progress has been hindered by recruiting, attrition (23.4 percent), absenteeism, and military transfers. These problems have resulted in fewer than seven training inputs per month continuing training, as compared to a minimum requirement of twenty-five training inputs per month necessary to meet the Peace Hawk V goal of 1,646 trained technicians by June 1979.

Other factors which have impacted on RSAF training progress include the very small size of the Saudi Arabian work force, a lack of education and technical skills among the Saudi people, and competition for skilled labor from Saudi Arabia's growing industrial sector. The Saudi Arabian government has taken steps to increase the educational level of its people (see Chapter II) and also has increased RSAF salaries in an attempt to provide more training inputs for Peace Hawk.

Recommendations for Future Study

If the Peace Hawk program continues past termination of the Peace Hawk IV, V, and VI contracts, studies which continue and complete documentation of Peace Hawk should be undertaken to provide future students of FMS with a complete record of this program. Comparative studies between the logistics aspects of Peace Hawk and the Peace Log program with Iran could provide further insights into the sales of logistics support systems to expanding "third world" allies and friendly nations whose economic capability of purchasing complex defense systems temporarily exceeds their technological base for supporting them. The growth of USAF involvement in non-standard support, currently still in developmental stages, should not go undocumented or unstudied. Abundant sources for these studies and others, such as the RAFS computerization of FMS milestones, planning factor files, and requisition status are available within HQ AFLC and AFALD located at Wright-Patterson AFB, Ohio.

APPENDIX A

DD FORM 1513, OFFER AND ACCEPTANCE
PHASE I

PHASE I

UNITED STATES DEPARTMENT OF DEFENSE OFFER AND ACCEPTANCE	(1) PURCHASER (Name and Address)(Include ZIP Code)
(2) PURCHASER'S REFERENCE / (3) CASE DESIGNATOR: As indicated below	Government of Saudi Arabia

OFFER

This Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES: 1 August 19 71

(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE: ATLEE R. ELLIS, COL, USAF

(6) DATE: 26 July 1971

(7) US DEPARTMENT OF: Air Force

ITEM OR REF. NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
1.	(SR-SAL) F-5B aircraft (Note 1)	20	Ea	1,259,000 (Note 11)	25,180,000	
	Technical Orders				1,140,000	
	Additive Options					
	a. Avionics	20			1,398,500	
	b. ILS and Flight Director System	20			770,000	
2.	(SR-SAN) Training Device F-5B (Note 2)	1	Ea		1,360,000	
3.	(SR-SAR) Common AGE F-5B (Note 3)				2,819,000	
4.	(SR-SAT) Spare Parts F-5B (Note 4)				5,337,000	
5.	(SR-SAU) Spare Engines F-5B J-85-13 with afterburner	8	Ea	126,000	1,238,000	
	F-5B J-85-13 without afterburner	2	Ea	115,000		
6.	(SR-SAV) Contractor Technical Support (Note 5)				1,243,530	
7.	(SR-SAW) USAF Travel (AFSC) (Note 6)				24,000	
8.	(SR-SAX) USAF Travel (AFLC) (Note 7)				24,000	

(15) ESTIMATED COST	$
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS	
(17) ESTIMATED ADMINISTRATIVE CHARGE	
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS	
(19) OTHER ESTIMATED COSTS (Specify)	
(20) ESTIMATED TOTAL COSTS	$

(21) TERMS

ACCEPTANCE

(22) I am a duly authorized representative of the Government of _____ and upon behalf of said Government, accept this offer under the terms and conditions contained herein. In this (its) _____ day of _____ 19 ____.

(23) TYPED NAME AND TITLE

(24) OFFER/RELEASE CODE

(25) FREIGHT FOR-WARDER CODE:

(26) MARK FOR CODE:

(27) POINT OF DELIVERY:

(28) SIGNATURE

AUTOMATIC DATA PROCESSING

DD FORM 1513

PAGE OF PAGES

UNITED STATES DEPARTMENT OF DEFENSE
OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address)(Include ZIP Code): Government of Saudi Arabia

(2) PURCHASER'S REFERENCE:

(3) CASE DESIGNATOR: As indicated below

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES ________, 19__

(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE

(6) DATE

(7) US DEPARTMENT OF

ITEM OR REF NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
	(Continued)					
9.	(SR-SAY) Preparation of Aircraft for flight delivery (Note 8)	20	Ea	3,200	64,000	
10.	(SR-SAZ) Aircraft delivery (Note 9)	20	Ea	14,000	280,000	
11.	(SR-SBJ) Flyaway Kit (Note 13)				305,000	
	Training (Note 10)					

(15) ESTIMATED COST	$41,133,030
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS (Note 12) 3½%	296,135
(17) ESTIMATED ADMINISTRATIVE CHARGE	823,[illegible]
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS	
(19) OTHER ESTIMATED COSTS (Specify)	
(20) ESTIMATED TOTAL COSTS	$42,302,326

(21) TERMS

Dependable Undertaking

5 Atch
1. Conditions (Reverse of DD Form 1513)
2. Notes
3. Additional Terms and Conditions
4. Additional Terms and Conditions (SR-SAZ)
5. Estimated Schedule of Disbursements

ACCEPTANCE

(22) I am a duly authorized representative of the Government of Saudi Arabia and upon behalf of said Government, accept this offer under the terms and conditions contained herein this 28 day of July 19 71.

(23) OFFER/RELEASE CODE:

(25) FREIGHT FORWARDER CODE:

(26) MARK FOR CODE: Item 1: Saudi Arabia

(27) POINT OF DELIVERY: Other - USA

(?) TYPED NAME AND TITLE: PRINCE SULTAN BIN ABDUL AZIZ, MINISTER OF DEFENSE AND AVIATION

(?) SIGNATURE:

DD FORM 1513

PAGE OF PAGES

APPENDIX B

DD FORM 1513, OFFER AND ACCEPTANCE
PHASE II

PHASE II

UNITED STATES DEPARTMENT OF DEFENSE
OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address, Include ZIP Code)
Revised 28 Sept 1971
Government of Saudi Arabia

(2) PURCHASER'S REFERENCE
(3) CASE DESIGNATOR: As indicated below

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) stated below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES: 1 Oct, 19 71

GUY F. HELLWEGE, LT COL, USAF
(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE

28 Sept 71
(6) DATE

(7) US DEPARTMENT OF Air Force

ITEM OR REF. NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
1.	(SR-SAM) F-5E Aircraft (Note 1)	30	Ea	1,393,600	56,310,000	
	Technical Data				750,000	
	OPTIONS:					
	a. Not applicable					
	b. ILS Localizer				320,000	
	c. Assisted Take-Off (ATO)				441,000	
	d. RF-5A Reconnaissance (KS-92 Camera) System 6 nose kits				1,050,000	
	e. Four Reconnaisance Pods				3,947,000	
	f. Desert camouflage paint				45,000	
	g. Flight Test to add Jettison Capability				495,000	
	h. 275 gallon tanks on inboard stations				3,051,000	
	i. 150 gallon tanks on all three stations				1,223,000	
2.	(SR-SAP) Training Device, F-5E (Note 2)	1			2,549,000	
3.	(SR-SBA) Common AGE, F-5E (Note 3)				9,156,000	

(15) ESTIMATED COST	$
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS	
(17) ESTIMATED ADMINISTRATIVE CHARGE	
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS	
(19) OTHER ESTIMATED COSTS (Specify)	
(20) ESTIMATED TOTAL COSTS	$

(21) TERMS

ACCEPTANCE

(22) I am a duly authorized representative of the Government of ______ and upon behalf of ______ said Government, accept this offer under the terms and conditions cited and hereon.

(23) ______ Day of ______ 19 ______

(24) OFFER/RELEASE CODE ______

(25) FREIGHT FORWARDER CODE ______

(26) MARK FOR CODE ______

(27) POINT OF DELIVERY ______

(28) TYPED NAME AND TITLE

(29) SIGNATURE

DD FORM 1513

PAGE ______ OF ______ PAGES

UNITED STATES DEPARTMENT OF DEFENSE
OFFER AND ACCEPTANCE

(3) PURCHASER (Name and address, including ZIP Code)
Revised 28 Sept 1971
Government of Saudi Arabia

(2) PURCHASER'S REFERENCE | (3) CASE DESIGNATOR: As indicated below

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES _____, 19__

(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE
23 Sept 1971
(6) DATE

(7) US DEPARTMENT OF _____

(1) ITEM OR REF NO. (9)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
	(Continued)					
4.	(SR-SAS) Peculiar AGE, F-5E (Note 4)				4,303,000	
5.	(SR-SBB) Spare Parts, F-5E (Note 5)				14,394,000	
6.	(SR-SBC) Spare Engines F-5E J-85-21 with afterburner	10	Ea	184,000	2,670,000	
	F-5E J-85-21 without afterburner	5	Ea	166,000		
7.	(SR-SBD) Contractor Technical Support (Note 6)				970,470	
8.	(SR-SBE) USAF Travel (AFSC) (Note 7)				36,000	
9.	(SR-SBF) USAF Travel (AFLC) (Note 8)				36,000	
10.	(SR-SBG) Preparation of aircraft for flight delivery (Note 9)	30	Ea	3,200	96,000	
11.	(SR-SBH) Aircraft Delivery (Note 10)	30	Ea	14,000	420,000	
12.	(SR-SBJ) Insurance (Note 14)	50	Ea		1,031,000	
	Training (Note 11)					
	**PH&C (Note 12)					

(15) ESTIMATED COST		$ 103,693,470
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS	**3½%	974,855
(17) ESTIMATED ADMINISTRATIVE CHARGE		2,073,869
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS		
(19) OTHER ESTIMATED COSTS (Specify)		
(20) ESTIMATED TOTAL COSTS		$ 106,742,194

(21) TERMS *Dependable Undertaking

Additional Conditions Attached:
1. Conditions (Standard DD Form 1513 contract terms)
2. Notes
3. Additional Terms and Conditions
4. Additional Terms and Conditions for Case SR-SBH
*5. Estimated Schedule of Disbursements

ACCEPTANCE

(22) I am a duly authorized representative of the Government of _____

Saudi Arabia and upon behalf of

said Government, accept this offer under the terms and conditions cited and hereon

this 29 day of September 19 71

(23) NAME AND TITLE
PRINCE SULTAN BIN ABDUL AZIZ
MINISTER OF DEFENSE AND AVIATION

(24) OFFER RELEASE CODE _____

(25) FREIGHT FOR: MARK FOR CODE: _____

(26) MARK FOR CODE _____

(27) POINT OF DELIVERY Item 1: Saudi Arabia
Other Locations

(28) SIGNATURE

DD Form 1513

PAGE OF PAGES

APPENDIX C

DD FORM 1513, OFFER AND ACCEPTANCE
PHASE III

PHASE III

UNITED STATES DEPARTMENT OF DEFENSE
OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address)(Include ZIP Code): Government of Saudi Arabia

(2) PURCHASER'S REFERENCE: PEACE HAWK PHASE III (See below) Rev.

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES: 15 Apr 19 72

(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE: RAOUL S. BARKER, LT COL, USAF

(6) DATE: 30 Mar 72

(7) US DEPARTMENT OF: Air Force

ITEM OR REF NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	ESTIMATED AVAILABILITY AND REMARKS (14)
1.	(SR-GAB) Contractor Technical Services and Technical Facilities as defined in attached Statement of Work (Volumes IA & IB) as revised during negotiations with the RSAF in February and March 1972. (15 April 72 - 15 August 75)				128,048,300	
2.	(SR-GAC) USAF Technical Services in support of Item 1. (Contract Administration) (15 April 72 - 15 August 75)				6,850,230	

A. The Government of Saudi Arabia directs that contractor technical services and technical facilities (Item 1) be provided by Northrop Corporation on a sole source basis.

B. Attached Notes and Additional Terms and Conditions are an integral part of this letter of offer and acceptance.

C. If continuation of services beyond 15 August is desired, the USAF must be so advised not later than 1 July 1974.

D. Copies of the Revised Statement of Work will be provided the Government of Saudi Arabia within 33 days after acceptance of

(15) ESTIMATED COST	$
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS	
(17) ESTIMATED ADMINISTRATIVE CHARGE	
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS	
(19) OTHER ESTIMATED COSTS (Specify)	
(20) ESTIMATED TOTAL COSTS	$

(21) TERMS

ACCEPTANCE

(22) I am a duly authorized representative of the Government of ______ and upon behalf of said Government, accept this offer under the terms and conditions contained herein ______ this ______ day of ______ 19 ______

(24) OFFER/RELEASE CODE

(25) FREIGHT FORWARDER CODE

(26) MARK FOR CODE

(27) POINT OF DELIVERY

(28) TYPED NAME AND TITLE

(29) SIGNATURE

DD FORM 1513

PAGE ______ OF ______ PAGES

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UNITED STATES DEPARTMENT OF DEFENSE
OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address)(Include ZIP Code): GOVERNMENT OF SAUDI ARABIA

(2) PURCHASER'S REFERENCE — (3) CASE DESIGNATOR: PEACE HAWK PHASE III (See below) Rev.

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES ________, 19__

(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE

(6) DATE

(7) US DEPARTMENT OF ________

ITEM OR REF. NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
	(Continued) this offer. This revision will be based upon agreed upon minutes of USAF/RSAF negotiations. E. Amendment 1, 4 March 1972, will be revised within 35 days after acceptance of this offer. F. This offer supersedes all previous offers on these cases					

(15) ESTIMATED COST	$134,904,580
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS	
(17) ESTIMATED ADMINISTRATIVE CHARGE 1 Univ 2.	2,560,966
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS	
(19) OTHER ESTIMATED COSTS (Specify)	
(20) ESTIMATED TOTAL COSTS	$137,465,546

(21) TERMS

Dependable Undertaking

ACCEPTANCE

(22) I am a duly authorized representative of the Government of Saudi Arabia and upon behalf of said Government, accept this offer under the terms and conditions contained herein this 4 day of April 19 72.

(23) TYPED NAME AND TITLE: PRINCE SULTAN BIN ABDUL AZIZ, MINISTER OF DEFENSE AND AVIATION

(24) OFFER/RELEASE CODE ________

(25) FREIGHT FORWARDER CODE ________

(26) MARK FOR CODE ________

(27) POINT OF DELIVERY ________

(28) SIGNATURE

DD FORM 1513 PAGE OF PAGES

APPENDIX D

DD FORM 1513, OFFER AND ACCEPTANCE DEPOT SUPPLY SUPPORT PLAN

DEPOT SUPPLY SUPPORT PLAN

UNITED STATES DEPARTMENT OF DEFENSE
OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address) (Include ZIP Code): GOVERNMENT OF SAUDI ARABIA

(2) PURCHASER'S REFERENCE:

(3) CASE DESIGNATOR: SR-KAA

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES ________, 19__

RAOUL S. BARKER, LT COL, USAF
(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE

26 Feb 72
(6) DATE

(7) US DEPARTMENT OF ________

ITEM OR REF. NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
	Depot Supply Support Plan in support of F-5B and F-5E Aircraft. Stock Level Case (FMSO #1) This case will become effective upon acceptance and will remain valid until termination pursuant to the conditions set forth on the reverse. *The figure 5% is for system service charge. It covers supply management costs to the USAF resulting from the RSAF use of the USAF supply system.				3,225,795.13	

(15) ESTIMATED COST	$3,225,795.13
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS	
(17) ESTIMATED ADMINISTRATIVE CHARGE *5%	161,239.76
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS	
(19) OTHER ESTIMATED COSTS (Specify)	
(20) ESTIMATED TOTAL COSTS	$3,387,034.94

(21) TERMS

Cash in advance $996,201.45 (5/17th of estimated cost)
Paragraph D entitled Cooperative Logistics Arrangements on reverse of DD Form 1513 is hereby deleted.

1 Atch
Additional Terms and Conditions

ACCEPTANCE

(22) I am a duly authorized representative of the Government of ________ and upon behalf of ________ said Government, accept this offer under the terms and conditions contained herein, this (23) ________ day of ________, 19 ____

(24) OFFER/RELEASE CODE ________

(25) FREIGHT FORWARDER CODE ________

(26) MARK FOR CODE ________

(27) POINT OF DELIVERY ________

(28) TYPED NAME AND TITLE:
PRINCE SULTAN BIN ABDUL AZIZ
MINISTER OF DEFENSE AND AVIATION

(29) SIGNATURE

DD FORM 1513

PAGE ____ OF ____ PAGES

APPENDIX E

DD FORMS 1513, OFFER AND ACCEPTANCE
PHASE IV

UNITED STATES DEPARTMENT OF DEFENSE
OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address, including ZIP Code):
Government of Saudi Arabia
Office of the Air Attache
Van Ness Center, Suite 131
4301 Connecticut Ave., N.W.
Washington, D.C. 20008

(2) PURCHASER'S REFERENCE:

(3) CASE DESIGNATOR: Peace Hawk IV

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES: 31 Dec , 19 74

HAROLD L. PRICE, Maj Gen USAF
(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE
DIRECTOR OF MILITARY ASSISTANCE & SALES, DCS/S&L

27 November 1974
(6) DATE

(7) US DEPARTMENT OF Air Force

ITEM OR REF NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
1.	a. F-5E Aircraft, Peace Hawk II Configuration except ARC-164 Radio and ARN-XXX TACAN instead of ARC-159 and ARN-65	40	Ea	2,747,555	109,902,200	P Note 1
	b. Technical Data (SR-SCA)				2,200,000	
					112,102,200	
2.	Training Device consisting of one complete F-5E/F MTS (SR-SCB)	1	Ea	5,500,000	5,500,000	P(20) Note 2
3.	Common AGE-Long Lead Procurement (SR-SCC)				2,578,000	P(25) Note 3
4.	Common AGE-Standard Procurement (SR-SCD)				25,846,300	X(25) Note 4
5.	Developmental AGE-Long Lead Procurement (SR-SCE)				1,239,000	P(25) Note 2
6.	Developmental AGE-Standard Procurement (SR-SCF)				3,111,000	P(25) Note 4
7.	Spares-Long Lead Procurement (SR-SCG)				10,608,000	P(18) Note 3

(15) ESTIMATED COST	$
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS	
(17) ESTIMATED ADMINISTRATIVE CHARGE	
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS	
(19) OTHER ESTIMATED COSTS (Specify)	
(20) ESTIMATED TOTAL COSTS	$

(21) TERMS

ACCEPTANCE

(22) I am a duly authorized representative of the Government of ______ and upon behalf of ______ said Government, accept this offer under the terms and conditions contained herein, this ______ day of ______ 19 ______

(24) OFFER RELEASE CODE ______

(25) FREIGHT FORWARDER CODE ______

(26) MARK FOR CODE ______

(27) POINT OF DELIVERY ______

(23) TYPED NAME AND TITLE

(28) SIGNATURE

BEST AV...

UNITED STATES DEPARTMENT OF DEFENSE
OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address) (Include ZIP Code)

(2) PURCHASER'S REFERENCE

(3) CASE DESIGNATOR
Peace Hawk IV

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES ________, 19__

(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE

(6) DATE

(7) US DEPARTMENT OF ________

ITEM OR REF. NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
	(Continued)					
8.	Spares-Standard Procurement (SR-SCH)				34,684,221	X(13) Note 4
9.	Spare Engines J-85-21					
	a. With Afterburner	12	Ea	211,600	2,539,200	P(20)
	b. Without Afterburner (SR-SCJ)	8	Ea	192,600	1,540,800 4,080,000	
10.	Munitions (SR-SCK)				5,000,000	X(24) Note 4
11.	Contractor Engineering Technical Services (SR-SCL)	3	Man-Years	58,917	176,751	Note 5
12.	Weapons System Logistics Officer (SR-SCM)	4	Man-Years	35,926	143,704	Note 6
13.	USAF Travel (AFSC) (SR-SCN)				100,000	
14.	USAF Travel (AFLC) (SR-SCP)				100,000	
15.	Aircraft Delivery via C-5 Airlift (SR-SCR)				2,200,000	
16.	Air to Air Simulator (SR-SDA)	2	Ea		31,360,000	P(55) Note 12

(15) ESTIMATED COST	$
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS	
(17) ESTIMATED ADMINISTRATIVE CHARGE	
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS	
(19) OTHER ESTIMATED COSTS (Specify)	
(20) ESTIMATED TOTAL COSTS	$

(21) TERMS

ACCEPTANCE

(22) I am a duly authorized representative of the Government of ________ and upon behalf of said Government, accept this offer under the terms and conditions contained herein, this (23) ________ day of ________ 19 ____.

(24) OFFER/RELEASE CODE ________

(25) FREIGHT FORWARDER CODE: ________

(26) MARK FOR CODE: ________

(27) POINT OF DELIVERY: ________

(28) TYPED NAME AND TITLE

(29) SIGNATURE

DD FORM 1513

PAGE ____ OF ____ PAGES

UNITED STATES DEPARTMENT OF DEFENSE
OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address) (Include ZIP Code)

(2) PURCHASER'S REFERENCE

(3) CASE DESIGNATOR: Peace Hawk IV

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES ________, 19__

(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE

(6) DATE

(7) US DEPARTMENT OF

ITEM OR REF. NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
	(Continued)					
17.	Simulator Spares (SR-SDE)				6,700,000	X(55) Note 13
18.	Simulator AGE (SR-SDC)				3,380,000	X(55) Note 13
19.	Component Improvement Program (CIP) J-85-21 Engine, 1 Jan 75 - 31 Dec 77 (SR-SDD)				3,000,000	Note 14
20.	Open-end Modification Case to incorporate approved/qualified/certified options on Peace Hawk II Aircraft (SP-W3A)				70,000,000	Note 15 Note 16
21.	Open-end fund for Development, qualification/certification, and incorporation of F-5E improvements/options requested by the purchaser and approved for release by the USG (SR-XAA)				210,000,000	Note 15 Note 16

(15) ESTIMATED COST $

(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS

(17) ESTIMATED ADMINISTRATIVE CHARGE

(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS

(19) OTHER ESTIMATED COSTS (Specify)

(20) ESTIMATED TOTAL COSTS $

(21) TERMS

ACCEPTANCE

(22) I am a duly authorized representative of the Government of ________ and upon behalf of ________ said Government, accept this offer under the terms and conditions contained herein, this ____ day of ________ 19__.

(23) TYPED NAME AND TITLE

(24) OFFER/RELEASE CODE

(25) FREIGHT FORWARDER CODE

(26) MARK FOR CODE

(27) POINT OF DELIVERY

(28) SIGNATURE

DD FORM 1513

PAGE ___ OF ___ PAGES

UNITED STATES DEPARTMENT OF DEFENSE
OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address)(Include ZIP Code)

(2) PURCHASER'S REFERENCE | (3) CASE DESIGNATOR: Peace Hawk IV

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES _____, 19__

(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE

(6) DATE

(7) US DEPARTMENT OF

ITEM OR REF. NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
	(Continued) Follow-on support under Supply Support Arrangement (See Note 7) Stock Level Case $10,000,000 Requisition Case $ 7,000,000 Amounts in lines 15 through 20 are shown in whole dollars only.					

(15) ESTIMATED COST		$532,459,177
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS		2,663,368
(17) ESTIMATED ADMINISTRATIVE CHARGE	2%	10,649,184
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS		
(19) OTHER ESTIMATED COSTS (Specify) Transportation Item 10 11½%		575,000
(20) ESTIMATED TOTAL COSTS		$546,347,229

(21) TERMS Dependable Undertaking. Payments against this order will be requested as needed. Statements of FMS transactions from our billing office at Denver, Colo, will show amounts and dates payments are due.

2 Atch
1. Notes
2. Estimated Disbursement schedule

ACCEPTANCE

(22) I am a duly authorized representative of the Government of _____ and upon behalf of said Government, accept this offer under the terms and conditions contained herein on the 4th day of January 19 75

(23) TYPED NAME AND TITLE
PRINCE SULTAN BIN ABDUL AZIZ
MINISTER OF DEFENSE AND AVIATION

(24) OFFER/RELEASE CODE

(25) FREIGHT FORWARDER CODE:

(26) MARK FOR CODE

(27) POINT OF DELIVERY: Items 1 & 10 Saudi Arabia
Remainder USA

(28) SIGNATURE

AFLC-WPAFB-FEB 75 114

DD FORM 1513

BEST AVAILABLE COPY

UNITED STATES DEPARTMENT OF DEFENSE
OFFER AND ACCEPTANCE

(1) PURCHASER (name and address, include ZIP code): Government of Saudi Arabia, Office of the Air Attache, Van Ness Center, Suite 131, 4301 Connecticut Ave., NW, Washington, D.C. 20008

(2) PURCHASER'S REFERENCE:

(3) CASE DESIGNATOR: Peace Hawk IV (See Below)

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s), listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES 31 Dec, 19 74

HAROLD L. PRICE, Maj Gen
(5) SIGNATURE, TYPED NAME AND TITLE (USG REPRESENTATIVE)
DIRECTOR OF MILITARY ASSISTANCE & SALES, DCS/S&L

27 November 1974
(6) DATE

(7) US DEPARTMENT OF Air Force

ITEM OR REF. NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
1.	a. F-5F Aircraft, Peace Hawk II Configuration except ARC-164 Radio and ARN-XXX TACAN instead of ARC-150 and ARN 65 and no reconnaissance nose capability.	20	Ea	3,891,194	77,823,880	P Note 1
	b. Technical Data (SR-SCS)				1,200,000	
					79,023,880	
	Options:					
	a. In-Flight Refueling				4,336,300	
	b. Reconnaissance Nose Capability				2,300,000	
2.	Training Device consisting of modification to existing RSAF MTS to provide F-5F capability (SR-SCT)				2,100,000	P(20)
3.	Common AGE (SR-SCU)				15,538,000	X(25) Note 2

(15) ESTIMATED COST	$
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS	
(17) ESTIMATED ADMINISTRATIVE CHARGE	
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS	
(19) OTHER ESTIMATED COSTS (Specify)	
(20) ESTIMATED TOTAL COSTS	$

(21) TERMS

ACCEPTANCE

(22) I am a duly authorized representative of the Government of ____________ and upon behalf of ____________ said Government, accept this offer under the terms and conditions contained herein, this (23) ______ day of ____________ 19 ____.

(24) OFFER/RELEASE CODE ____________

(25) FREIGHT FORWARDER CODE ____________

(26) MARK FOR CODE ____________

(27) POINT OF DELIVERY ____________

(28) TYPED NAME AND TITLE

(29) SIGNATURE

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UNITED STATES DEPARTMENT OF DEFENSE
OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address)(Include ZIP Code)

(2) PURCHASER'S REFERENCE | (3) CASE DESIGNATOR: Peace Hawk IV

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES _____, 19___

(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE

(6) DATE

(7) US DEPARTMENT OF _____

ITEM OR REF. NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
4.	(Continued) Developmental AGE (SR-SCV)				1,000,000	P(25)
5.	Spares (SR-SCW)				23,497,000	X(18) Note 2
6.	Spare Engines, J-85-21					
	a. With Afterburner	6	Ea	211,600	1,269,600	
	b. Without Afterburner (SR-SCX)	4	Ea	192,600	770,400	P(20)
					2,040,000	
7.	Munitions (SR-SCY)				3,000,000	X(24) Note 2
8.	Aircraft Delivery via C-5 Airlift (SR-SCZ)				1,100,000	
9.	Reconnaissance Nose Kits (KS-121A) (SR-SDE)	10	Ea	255,000	2,550,000	P(24)
10.	Open-end fund for development, qualification/certification, and incorporation of any F-5F improvements/options requested by the purchaser and approved for release by the USG (SR-XAB)				80,000,000	Note 3 Note 9 Note 10

(15) ESTIMATED COST	$
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS	
(17) ESTIMATED ADMINISTRATIVE CHARGE	
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS	
(19) OTHER ESTIMATED COSTS (Specify)	
(20) ESTIMATED TOTAL COSTS	$

(21) TERMS

ACCEPTANCE

(22) I am a duly authorized representative of the Government of _____ and upon behalf of _____ said Government, accept this offer under the terms and conditions contained herein. On this (23) _____ day of _____ 19 ____

(24) OFFER/RELEASE CODE _____

(25) FREIGHT FOR-WARDER CODE _____

(26) MARK FOR CODE _____

(27) POINT OF DELIVERY _____

(28) TYPED NAME AND TITLE

(29) SIGNATURE

DD FORM 1513

UNITED STATES DEPARTMENT OF DEFENSE
OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address, Include ZIP Code)

(2) PURCHASER'S REFERENCE | (3) CASE DESIGNATOR: Peace Hawk IV

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES _____, 19__

(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE

(6) DATE

(7) US DEPARTMENT OF

(A) ITEM OR REF. NO.	(B) ITEM DESCRIPTION (Including stock number, if applicable)	(C) QUANTITY	(D) UNIT OF ISSUE	(E) ESTIMATED UNIT COST	(F) ESTIMATED TOTAL COST	(G) ESTIMATED AVAILABILITY AND REMARKS
	(Continued) Follow-on Support under Supply Support Arrangement (See Note 5). Stock Level Case $6,000,000 Requisition Case $4,300,000 Amounts in lines 15 through 20 are shown in whole dollars only.					
(13) ESTIMATED COST					$216,485,680	
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS					1,471,225	
(17) ESTIMATED ADMINISTRATIVE CHARGE			2%		4,329,714	
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS						
(19) OTHER ESTIMATED COSTS (Specify)	Transportation, Item 7		11½%		345,000	
(20) ESTIMATED TOTAL COSTS					$222,631,619	

(21) TERMS Dependable Undertaking. Payments against this order will be requested as needed. Statements of FMS transactions from our billing office at Denver, Colo, will show amounts and dates payments are due.

2 Atch
1. Notes
2. Estimated Disbursement Schedule

ACCEPTANCE

(22) I am a duly authorized representative of the Government of _____ and upon behalf of _____ said Government, accept this offer under the terms and conditions contained herein.

(23) This 4th day of January 19 75

(24) OFFER/RELEASE CODE

(25) FREIGHT FORWARDER CODE

(26) MARK FOR CODE Items 1 & 7

(27) POINT OF DELIVERY South Arabia

(28) TYPED NAME AND TITLE
PRINCE SULTAN BIN ABDUL AZIZ
MINISTER OF DEFENSE AND AVIATION

(29) SIGNATURE

DD FORM 1513

PAGE OF PAGES

APPENDIX F

DD FORM 1513, OFFER AND ACCEPTANCE
PHASE V

UNITED STATES DEPARTMENT OF DEFENSE
OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address) (include ZIP Code)
Government of Saudi Arabia
Office of the Armed Forces Attache
Van Ness Center, Suite 131
4301 Conn. Ave N.W., Wash. D.C. 20008

(2) PURCHASER'S REFERENCE

(3) CASE DESIGNATOR
Peace Hawk V

OFFER

This Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES 12 Feb 19 76

FRED L. STEADMAN, Col, USAF
(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE

31 January 1976
(6) DATE

(7) US DEPARTMENT OF Air Force

ITEM OR REF. NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
1.	Contractor Operational Support 16 Feb 76 - 15 Feb 79 (Services) (SR-GAN)					
	A. Program Management (Section I Program Description dated 10 Nov 75)					
	(1) Hawthorne Operation (a) Mobilization (b) Personnel cost, etc.			73,635,000		
	(2) In-country Operations (a) Demobilization (b) Personnel cost, insurance, tax, etc.			105,680,000		
	(3) Training Control (a) Personnel (b) Supplies/ Equipment (c) Travel & Demobilization			2,714,000		

(15) ESTIMATED COST	$
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS	
(17) ESTIMATED ADMINISTRATIVE CHARGE	
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS	
(19) OTHER ESTIMATED COSTS (Specify)	
(20) ESTIMATED TOTAL COSTS	$

(21) TERMS

ACCEPTANCE

(22) I am a duly authorized representative of the Government of ________ and upon behalf of ________ said Government, accept this offer under the terms and conditions contained herein, this (23) ____ day of ________ 19 ____

(24) OFFER RELEASE CODE
(25) FREIGHT FORWARDER CODE
(26) MARK FOR CODE
(27) POINT OF CONTACT

(28) TYPED NAME AND TITLE
(29) SIGNATURE

DD FORM 1513 1 JAN 71

PAGE ___ OF ___ PAGES

UNITED STATES DEPARTMENT OF DEFENSE

OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address)(Include ZIP Code)

(2) PURCHASER'S REFERENCE

(3) CASE DESIGNATOR: Peace Hawk V

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES _____, 19___

(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE

(6) DATE

(7) US DEPARTMENT OF _____

ITEM OR REF. NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
	(Continued)					
	B. Base Management (Section I Program Description dated 10 Nov 75) (1) Personnel (2) Supplies/Equipment (3) Travel & Demobilization			58,802,000		
	C. English Language Training (Section II Program Description dated 10 Nov 75) (1) Personnel (2) Supplies/Equipment (3) Travel & Demobilization			9,637,000		
	D. Technical Training (Section III Program Description dated 10 Nov 75) (1) Personnel (2) Supplies/Equipment (3) Travel & Demobilization			11,093,000		

(15) ESTIMATED COST	$
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS	
(17) ESTIMATED ADMINISTRATIVE CHARGE	
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS	
(19) OTHER ESTIMATED COSTS (Specify)	
(20) ESTIMATED TOTAL COSTS	$

(21) TERMS

ACCEPTANCE

(22) I am a duly authorized representative of the Government of _____ and upon behalf of _____ said Government, accept this offer under the terms and conditions contained herein. On this (23) _____ day of _____ 19 ____

(24) OFFER/RELEASE CODE

(25) FREIGHT FOR: MARK(S) CODE

(26) MARK FOR CODE

(27) POINT OF DELIVERY

(28) TYPED NAME AND TITLE

(29) SIGNATURE

DD FORM 1513

PAGE OF PAGES

UNITED STATES DEPARTMENT OF DEFENSE

OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address)(Include ZIP Code)

(2) PURCHASER'S REFERENCE

(3) CASE DESIGNATOR: Peace Hawk V

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES ________, 19___

(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE

(6) DATE

(7) US DEPARTMENT OF ________

ITEM OR REF NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
	(Continued)					
	E. Audio Visual Center (Section IV Program Description dated 10 Nov 75) (1) Personnel (2) Supplies/Equipment (3) Travel & Demobilization			2,690,000		
	F. Maintenance & CJT (Section V Program Description dated 10 Nov 75) (1) Personnel (2) Supplies/Equipment (3) Travel & Demobilization			217,334,000		
	G. Logistic & CJT (Section VI Program Description dated 10 Nov 75) (1) Personnel (2) Supplies/Equipment (3) Travel & Demobilization			62,046,000		

(15) ESTIMATED COST	$
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS	
(17) ESTIMATED ADMINISTRATIVE CHARGE	
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS	
(19) OTHER ESTIMATED COSTS (Specify)	
(20) ESTIMATED TOTAL COSTS	$

(21) TERMS

ACCEPTANCE

(22) I am a duly authorized representative of the Government of ________ and upon behalf of ________ said Government, accept this offer under the terms and conditions contained herein, this (23) ____ day of ________ 19 ____

(24) OFFER/RELEASE CODE ________

(25) FREIGHT FORWARDER CODE ________

(26) MARK FOR CODE ________

(27) POINT OF DELIVERY ________

(28) TYPED NAME AND TITLE

(29) SIGNATURE

DD FORM 1513

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UNITED STATES DEPARTMENT OF DEFENSE
OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address)(Include ZIP Code)

(2) PURCHASER'S REFERENCE

(3) CASE DESIGNATOR: Peace Hawk V

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES _____, 19__

(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE

(6) DATE

(7) US DEPARTMENT OF

ITEM OR REF. NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
	(Continued)					
	H. Operational Support Functions (Section VII Program Description dated 10 Nov 75) (1) Personnel (2) Supplies/Equipment (3) Travel & Demobilization			10,484,000		
	I. Sub Contracts (1) Personnel (2) Supplies/Equipment (3) Travel & Demobilization			159,141,000		
	J. Housing to Support Services Personnel			208,596,000		
	K. Contingency			50,000,000		
					977,402,000	
	Less termination & long lease funding provided in Peace Hawk III				(30,198,000)	
	Total Contract Services (SR-GAN)					947,204,000

(15) ESTIMATED COST	$
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS	
(17) ESTIMATED ADMINISTRATIVE CHARGE	
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS	
(19) OTHER ESTIMATED COSTS (Specify)	
(20) ESTIMATED TOTAL COSTS	$

(21) TERMS

ACCEPTANCE

(22) I am a duly authorized representative of the Government of _____ and upon behalf of _____ said Government, accept this offer under the terms and conditions contained herein. On this (23) _____ day of _____ 19 ____.

(24) OFFER/RELEASE CODE

(25) FREIGHT FORWARDER CODE

(26) MARK FOR CODE

(27) POINT OF DELIVERY

(28) TYPED NAME AND TITLE

(29) SIGNATURE

DD FORM 1513

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UNITED STATES DEPARTMENT OF DEFENSE

OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address, include ZIP Code)

(2) PURCHASER'S REFERENCE

(3) CASE DESIGNATOR: Peace Hawk V

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES ________, 19___

(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE

(6) DATE

(7) US DEPARTMENT OF ________

ITEM OR REF. NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	ESTIMATED AVAILABILITY AND REMARKS (14)
	(Continued)					
2.	Technical Construction (SR-GAT) (Section VIII Program Description dated 10 Nov 75)					
	Dhahran 26 items					
	Taif 26 items					
	Khamis Mushayt 26 items					
	A. Construction Management			48,269,000		
	B. Technical Construction Support			3,167,000		
	C. Construction			345,795,747		
	D. Design			5,384,000		
	E. Furnishings & Equipment			111,736,253		
	F. Housing for Construction Personnel			15,715,000		
	G. Contingency			25,000,000		
					555,117,000	
	Less design, management & long lead material provided in Peace Hawk III				(31,480,000)	

(15) ESTIMATED COST	$
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS	
(17) ESTIMATED ADMINISTRATIVE CHARGE	
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS	
(19) OTHER ESTIMATED COSTS (Specify)	
(20) ESTIMATED TOTAL COSTS	$

(21) TERMS

ACCEPTANCE

(22) I am a duly authorized representative of the Government of ________ and upon behalf of ________ said Government accept this offer under the terms and conditions cited and hereon ________ this ________ day of ________ 19 ____

(23) TYPED NAME AND TITLE

(24) OFFER/RELEASE CODE

(25) FREIGHT FORWARDER CODE

(26) MARK FOR CODE

(27) POINT OF DELIVERY

(28) SIGNATURE

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PAGE OF PAGES

UNITED STATES DEPARTMENT OF DEFENSE
OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address (Include ZIP Code))

(2) PURCHASER'S REFERENCE | (3) CASE DESIGNATOR: Peace Hawk V

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES _____, 19__

(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE

(6) DATE

(7) US DEPARTMENT OF

ITEM OR REF. NO. (4)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
	(Continued)					
	Total Technical Construction					523,637,000
3.	Materiel Support (SR-GAR) (Section VI Program Description dated 10 Nov 75)				31,500,000	31,500,000
4.	Additional Services					
	A. Increase English Language Training (SR-GAV) (Section II Program Description dated 10 Nov 75)			3,095,000		
	B. Custodial Services (SR-GAW) (Section VIII Program Description dated 10 Nov 75)			6,434,000		
	C. Training Aids (SR-GAX)			81,000		
					9,610,000	9,610,000
5.	U S G Technical Services (SR-GAS) (Section I Program Description dated 10 Nov 75)				31,210,000	31,210,000

(15) ESTIMATED COST	$
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS	
(17) ESTIMATED ADMINISTRATIVE CHARGE	
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS	
(19) OTHER ESTIMATED COSTS (Specify)	
(20) ESTIMATED TOTAL COSTS	$

(21) TERMS

ACCEPTANCE

(22) I am a duly authorized representative of the Government of _____ and upon behalf of _____ the Government, accept this offer under the terms and conditions contained herein. This (22) _____ day of _____ (23) _____

(24) OFFER/RELEASE CODE

(25) FREIGHT FOR MARKING CODE

(26) MARK FOR CODE

(27) POINT OF DELIVERY

(28) TYPED NAME AND TITLE

(29) SIGNATURE

DD FORM 1513

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UNITED STATES DEPARTMENT OF DEFENSE
OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address)(Include ZIP Code)

(2) PURCHASER'S REFERENCE | (3) CASE DESIGNATOR: Peace Hawk V

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES ______, 19__

(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE

(6) DATE

(7) US DEPARTMENT OF ______

ITEM OR REF NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
	(Continued)				1,543,161,000	
	AMOUNTS SHOWN ON THIS LOA ARE IN WHOLE DOLLARS ONLY					

(15) ESTIMATED COST		$ 1,543,161,000
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS		
(17) ESTIMATED ADMINISTRATIVE CHARGE	2%	30,863,220
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENT		
(19) OTHER ESTIMATED COSTS (Specify)		
(20) ESTIMATED TOTAL COSTS		$ 1,574,024,220

(21) TERMS Dependable Undertaking. Payments against this order will be requested as needed. Statements of FMS transaction from our billing office at Denver, Colo, will show amounts and dates payments are due.

2 Atch
1. Notes
2. Additional Terms & Conditions

ACCEPTANCE

(22) I am a duly authorized representative of the Government of ______ and on its behalf ______

(23) I, on its behalf, accept this offer under the terms and conditions contained herein this 22 day of February 19 76

(24) OFFEROR/RELEASE CODE ______

(25) FREIGHT FORWARDER CODE ______

(26) MARK FOR CODE ______

(27) POINT OF DELIVERY ______

(28) TYPED NAME AND TITLE
PRINCE SULTAN BIN ABDUL AZIZ
MINISTER OF DEFENSE AND AVIATION

(29) SIGNATURE

DD FORM 1513

PAGE ___ OF ___ PAGES

APPENDIX G

DD FORM 1513, OFFER AND ACCEPTANCE
PHASE VI

UNITED STATES DEPARTMENT OF DEFENSE

OFFER AND ACCEPTANCE

(1) PURCHASER (Name and Address) (Include ZIP Code)
Government of Saudi Arabia
Van Ness Center, Suite 131
4301 Connecticut Ave., N.W.
Washington, D.C. 20008

(2) PURCHASER'S REFERENCE: USMTM Msg 301130Z Mar 76

(3) CASE DESIGNATOR: Peace Hawk VI

OFFER

The Government of the United States hereby offers to sell to the above purchaser the defense article(s) and defense service(s) listed below, subject to the terms contained herein and conditions cited on the reverse.

(4) THIS OFFER EXPIRES: 1 Nov, 19 76

(5) SIGNATURE, TYPED NAME AND TITLE OF US REPRESENTATIVE: JAMES H. AHMANN, Brig Gen, USAF

(6) DATE: 6 October 1976

(7) US DEPARTMENT OF: Air Force

ITEM OR REF NO. (8)	ITEM DESCRIPTION (Including stock number, if applicable) (9)	QUANTITY (10)	UNIT OF ISSUE (11)	ESTIMATED UNIT COST (12)	ESTIMATED TOTAL COST (13)	AVAILABILITY AND REMARKS (14)
1.	F-5F Aircraft (Peace Hawk IV Configuration) (SR-SDK)	4	Ea			Note 1
	A. Aircraft & Provisioning (includes airframe, propulsion, electronics, armament, CFP & services)			4,627,000	18,508,000	
	B. Engineering Change Orders (ECO's)			549,000	2,196,000	Note 2
	C. Technical data			243,000	972,000	Note 3
	D. R & D Recoupment			207,000	828,000	Note 4
	E. Component improvement program (CIP)			16,000	64,000	Note 5
	F. Aircraft Integrity Program (ASIP)			5,000	20,000	Note 6
	Total Flyaway			5,647,000	22,588,000	
2.	Aircraft Delivery Via C-5 (SR-SDL)	4	Ea	70,112	280,448	Note 7
	Amounts in lines 15 through 20 are shown in whole dollars only.					

(15) ESTIMATED COST		$ 22,868,448
(16) ESTIMATED PACKING, CRATING, AND HANDLING COSTS		
(17) ESTIMATED ADMINISTRATIVE CHARGE	2%	457,369
(18) ESTIMATED CHARGES FOR SUPPLY SUPPORT ARRANGEMENTS		
(19) OTHER ESTIMATED COSTS (Specify)		
(20) ESTIMATED TOTAL COSTS		$ 23,325,817

(21) TERMS: Dependable Undertaking. Payments against this order will be requested as needed. Statements of FMS transactions from our billing office at Denver, Colo., will show amounts and dates payments are due. (Note 9)

ACCEPTANCE

(22) I am a duly authorized representative of the Government of ______ and upon behalf of ______ said Government accept this offer under the terms and conditions contained herein.

(23) DATED THIS 30 DAY OF January 19 77

(24) OFFEROR RELEASE CODE ______

(25) FREIGHT FORWARDER CODE ______

(26) MARK FOR CODE ______

(27) POINT OF DELIVERY ______

(28) TYPED NAME AND TITLE: PRINCE SULTAN BIN ABDUL AZIZ, MINISTER OF DEFENSE AND AVIATION

(29) SIGNATURE

DD FORM 1513

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